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OS X Mavericks

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March 2014

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*Human thermal sensation to air movement frequency. Yizai Xia, Rongyi Zhao and Weiquan Xu (2000)

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 By Dan Moren

Rooting for the Competition

For its own sake and for ours, Apple needs to feel the heat of competition, and soon. Here's why.

Sometimes you're just ahead of the game.

Take, for example, the makers of exotic sports cars—Porsche, Ferrari, Lamborghini. From year to year, how much do their high-end products actually change? How much do their models even need to?

In that respect, they share a thing or two with Apple.

The comparison to high-end luxury automakers isn't novel, but it struck me anew as I walked the floor of the L.A. Auto Show recently. A companion said that she was often less excited by those exotic cars than by more ordinary ones, since they didn't undergo as many radical changes as consumer-oriented models.

After all, it's not as if people are going to stop buying those luxury brands—even if their cars offer worse gas mileage and cost way more than one that will still get you from your house to Starbucks. Those luxury automakers just aren't driven by the same scrum of competition that you find among the Fords, Hondas, and Toyotas of the world. Certain people will still buy a Porsche or a Ferrari, because customers in that market are not shopping for cars the same way the rest of us are.

Likewise, Apple doesn't believe it's playing in the "tablet market" so much as in the "iPad market." That's why the company doesn't allow itself to get dragged down into feature comparisons or checklists. People will buy an iPad because they want an iPad, comparisons with other tablets being irrelevant.

The Horseless-Carriage Race

And that is why I find myself rooting for the competition.

When you're at the point where Apple is now, your competitive lead often seems to be measured not in gigabytes or megahertz, but in years. The enemy isn't those other companies in the rear-view mirror—it's yourself. It's complacency.

PHOTOGRAPH BY ROBERT CARDIN

> Looking at Apple's latest releases, such as iOS 7, I've started to see, for the first time in a long time, certain rough edges.

I'm not talking doom-and-gloom, "Apple must innovate or die." Apple's not going to go out of business if Amazon or Google suddenly turns out a revolutionary smartphone, tablet, or PC, any more than a high-end Ford sports car is going to put Ferrari out of business.

But that doesn't mean worrisome cracks in the façade don't occasionally appear. I'm less concerned about any perceived lack of innovation from Apple than I am about some little things.

Looking at Apple's latest releases, I've started to see, for the first time in a long time, certain rough edges. This fall, Apple shipped two major OS updates concurrently, and to my mind both iOS 7 and Mavericks suffered for that, with glitches and bugs in established features, such as Mail, that should be rock-solid.

Innovation vs. Old Reliable

Pumping out innovative new products every few years is a hard business model to sustain—and Apple does it better than most. But a flip side to the boom-level highs that come with innovative new products is that, during the downtime, when you're evolving rather than revolutionizing, your products should be as reliable and as bulletproof as possible.

Not everybody sees things that way, clearly—we can all name plenty of tech companies that have shipped products that seemed half-baked at best. Should Apple be held to a different standard? Well, yes and no. The company obviously holds itself to a different standard, as its customers do, fairly or not.

The little things, in many ways, matter more than the big. Though the high-end luxury cars may not compete with economy automobiles on the basis of features, you still don't want to pay more for a fancy sports car only to be plagued by dashboard lights that burn out or plastic switches that snap off. Plenty of products that look great on the outside—whether smartphones or automobiles—lose their luster once you actually use them. That shouldn't happen with Apple products.

The Race Is Not Always to the Swift

So when I start to see those smaller problems and rough edges, that's when I start to root for the competition. Better tablets, phones, and computers from Apple's competitors mean that Apple's people will work that much harder to make their products that much better. If they don't, someone else will.

Even though I might not be the first person in line for a device from one of Apple's competitors, I do appreciate the service they provide: They keep Apple hungry and remind it that the company is where it is for a reason.

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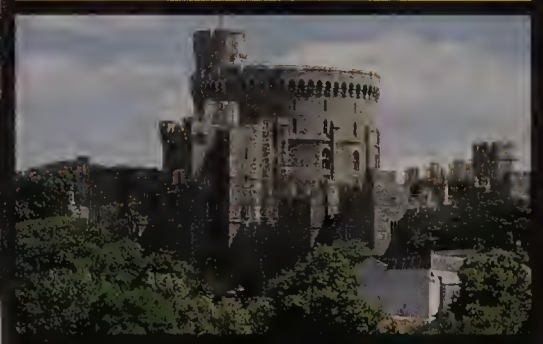

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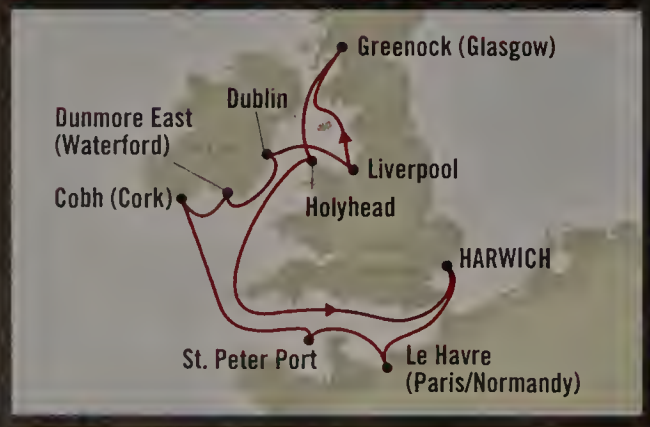

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Tips, Tips, Everywhere

We've collected advice for Mavericks users in this issue, and readers sent some Mac tricks. Folks are also struggling with Touch ID (see page 32), and the song of the Mac Pro is in the air (see our review on page 12).

TOUCH ID WINS AND WOES

Scan the tips, edges, and sides of your finger. The technology works by stitching together a master template from the multiple scans. I scanned the bottom of my thumb, and made successive overlapping passes until almost my entire thumb, including the sides and edges, were part of the template.

—lhudd, via Macworld.com

I have two scans of my right thumb in slightly different angles. It still usually catches my primary one (which I tested by going into the Touch ID settings and tapping the sensor a few times, and seeing what highlighted), but every once in a while it uses my backup.

—SichasStudios, via Macworld.com

My sensor seems to like a "warmup." If I scan my print at a random time, I get about a 75 percent recognition rate. If I scan my print and then scan it again immediately after, the success rate is 99.9 percent.

—wigby, via Macworld.com

Its ability to authorize me started at 100 percent of login, and went steadily downhill to 0 percent. I rescanned and experienced the same degradation over a week or so. I have turned off TouchID forever.

—BigGovGuy, via Macworld.com

THE PROMISE OF THE PRO

I'm an illustrator/animator and off-and-on video pro who uses a 2007 Mac Pro. If price weren't a factor, I would snatch up a loaded Mac Pro; but once you add the necessities and upgrades, the price almost doubles.

I'm trying to decide between the new Mac Pro and the Modbook Pro, which is essentially a MacBook Pro converted into a Cintiq tablet computer. I'm just not sure that the Modbook Pro is powerful enough, or expandable enough, to keep me happy for the next five years. Both choices are pricey.

—cinemachine, via Macworld.com

I'm ready to retire my early-2008 Mac Pro. I am not an A/V pro, but I do need a fast, high-capacity system. I'm waiting to see if Apple will offer new display options. Going with a Mac Pro means purchasing two monitors, but there's only one to buy if I go with an iMac. In either case, I need an external optical drive, but with the Mac Pro, I also need a keyboard and Magic Trackpad. I'm not sure if I can justify the extra cost to get the Mac Pro I want.

—cina, via Macworld.com

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YOUR BEST MAC TIPS

Readers offer tips every Mac user should know.

@drthunder: Make good use of free classes at the Apple store.

@technorav: ⌘-<Tab>; ⌘-Q while ⌘-tabbing; dragging between apps/windows by holding button while hitting ⌘-<Tab> or ⌘-`.

@AMDeeb90: Use Time Machine!

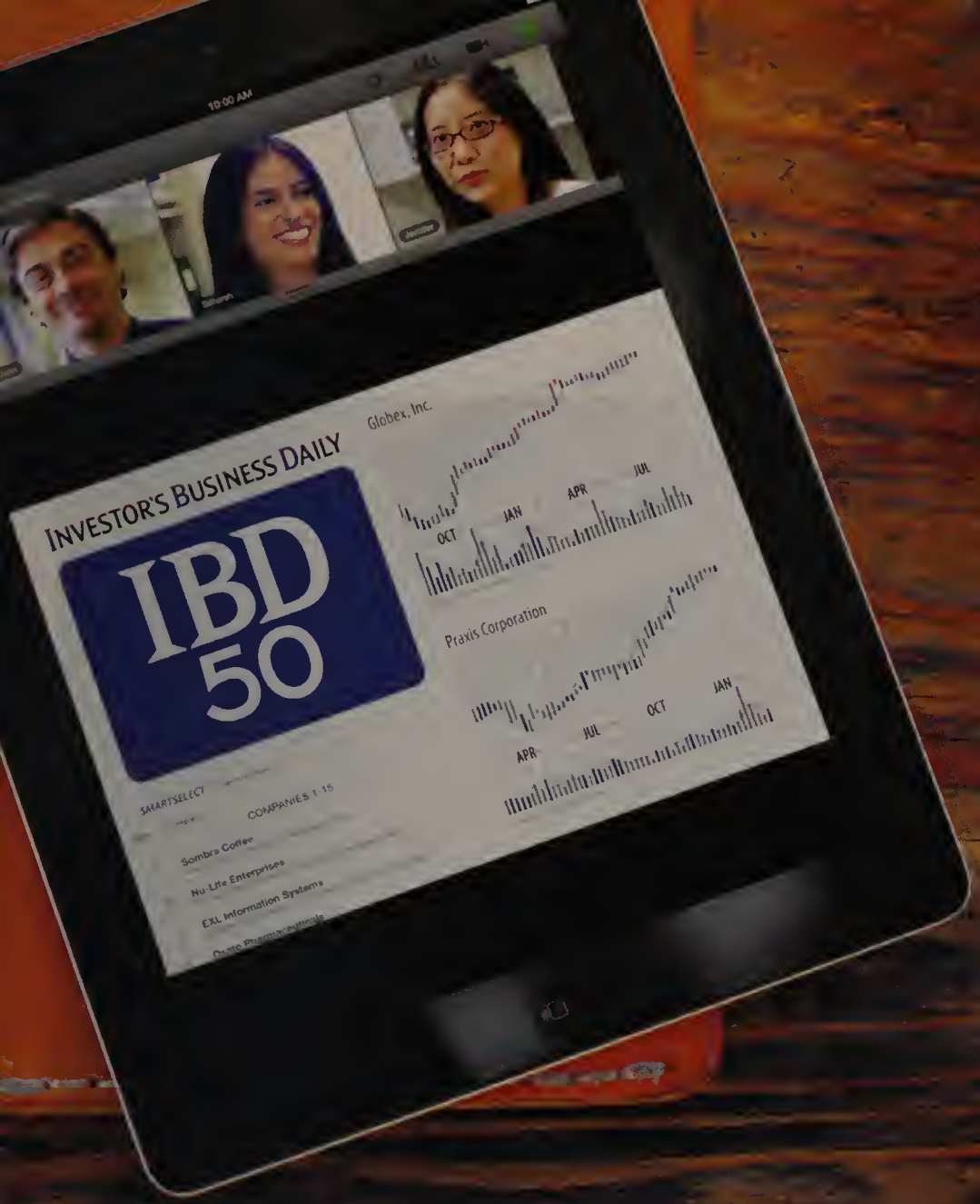
@thezinxmag: Remove system icons from the Finder bar at top right by holding ⌘ and dragging the icon out.

@DJMACKEY: ⌘-<Shift>-3 = screen capture.

THROUGH THE LENS: THAT'S SOME CLOCK

The Mac SE may be 27 years old, but Richard Henneberry still has it working hard in his Melbourne, Florida, home: "It runs OS 7.1 and old programs such as Money Matters—still the easiest way to calculate simple financial transactions."

Have a great Apple-centric photo? Send it to letters@macworld.com, and we may feature it in a future issue.



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News and Analysis About Macs, OS X, and Apple

New Mac Pro Really Is for Pros

Will it suit the way you work? That depends on the apps and expansion options you need.

BY DAN FRAKES

Canned Computing The new, space-gray Mac Pro is extremely space-efficient.

Review
RATING ★★★★
PRICE $2999–$3999
COMPANY Apple
URL apple.com

Depending on your needs, the new Mac Pro may be just what you want (a state-of-the-art, multicore-processor, workstation-GPU computer that doesn't waste space and resources on unnecessary expandability), or not at all what you want (a workhorse tower with tons of bays and slots for expansion).

Apple has done away with the massive enclosure of earlier Mac Pros: The new Mac Pro is a small cylinder with a beautiful, unibody exterior made from a single block of aluminum. Its color is similar to the "space gray" finish of Apple's current iPhone and iPad models.

The cylinder is just 9.9 inches tall and 6.6 inches in diameter. Apple says the new model is about one-eighth the size of the 2012 Mac Pro, but that proportion doesn't hit home until you see the new Mac Pro sitting next to one of its predecessors.

Apple achieved the size reduction in part by dropping many things other pro-level computers reserve internal space for: multiple bays for hard drives, multiple slots for graphics and expansion cards, and room for an optical drive (or two). Most of the 2013 Mac Pro's expansion options are instead available on the outside. A compact panel hosts four USB 3.0 ports, six Thunderbolt 2 ports (two each on three independent controllers), two gigabit ethernet connections, an HDMI 1.4 (audio/video) port, a ⅛-inch analog/optical-digital line-out jack, and a ⅛-inch headphone/headset jack.

Not having traditional hard drives, PCI expansion cards, PCI-card GPUs, and the like inside does wonders for the Mac Pro's internal temperatures. The system also incorporates what Apple calls a *unified thermal core*—a large, triangular, extruded-aluminum frame in the middle of the computer that acts as a central heat sink. The triangle's interior looks like a traditional heat sink, with thin slats to increase surface area. Coupled to separate sides of the triangle are the Mac Pro's CPU and its two GPUs. The result is a single heat sink for the entire computer. Apple says

Thanks to its diminutive profile and attractive design, the new Mac Pro is unmistakably meant to sit on your desk, not under it.

the design lets the components share the core's thermal efficiency, as it pulls heat away from each component and distributes the heat evenly across the core. Even when the system is working hard, the aluminum exterior feels warm, not hot.

The new Mac Pro contains a single fan. Located just below the top of the cylinder, the fan draws air from vents at the bottom of the computer, pulls the air over the thermal core to cool it, and then pushes the warmed air out the ring atop the enclosure. The 2013 Mac Pro's fan is nearly silent in normal use. If you put your ear next to the vent on the top, you hear only a subdued hum. In my quiet office, I couldn't hear the Mac Pro's fan over the noise of my 2010 iMac, even when live-rendering some effects on 4K video in Final Cut Pro X. You may still hear the fan, but you should expect a much quieter experience than with previous models.

All that tight fitting yields a dense system: Although the new model is just one-eighth the size of the 2012 Mac Pro, it's over one-fourth the latter's weight. Still, thanks to its diminutive profile and attractive design, the new Mac Pro is unmistakably meant to sit on your desk, not under it.

Pricing and Configurations

Apple sells two stock configurations of the 2013 Mac Pro, each running OS X 10.9 Mavericks. The $2999 model uses a 3.7GHz quad-core Intel Xeon E5 processor with 10MB of level 3 cache and includes 12GB of 1866MHz DDR ECC memory (RAM), dual AMD FirePro D300 graphics processors (each with 2GB of GDDR5 video RAM), and 256GB of PCIe-based flash storage. The $3999 model uses a 3.5GHz six-core Intel Xeon E5 processor with 12MB of L3 cache, plus 16GB of RAM, dual AMD FirePro D500 graphics processors (each with 3GB of VRAM), and 256GB of PCIe-based flash storage. Each model includes 802.11ac Wi-Fi (compatible with 802.11a/b/g/n), Bluetooth 4.0, and a built-in speaker; you also get copies of iPhoto, iMovie, GarageBand, Pages, Numbers, and Keynote, and the standard OS X apps.

Apple offers many configure-to-order options for each version. You can upgrade the $2999 Mac Pro to match the $3999 model's processor ($500), RAM ($100), or GPUs ($400)—the $3999 Mac Pro is just the $2999 model with those three standard upgrades. But you can keep going: Another $1500 fetches a 3.0GHz, eight-core CPU with 25MB of L3 cache, and $1500 beyond that gets you a 2.7GHz, 12-core CPU with 30MB of L3 cache.

On either model, once you get to 16GB of RAM, another $400 bumps you up to 32GB, and $800 more takes you to 64GB. A $300 premium yields 512GB of PCIe-based flash storage; add another $500 to get 1TB. A $600 premium over the price of dual AMD FirePro D500 GPUs fetches dual AMD FirePro D700 GPUs (each with 6GB of VRAM). Neither model has a display or a keyboard or other input device.

Little Dynamo New Mac Pro (left), and old Mac Pro (right)

Confused? Think of it this way: Apple essentially offers a base Mac Pro model for $2999, along with options for upgrading its processor, GPUs, RAM, and flash storage. A maxed-out 2013 Mac Pro (go.macworld.com/mpmaxed), complete with a 12-core processor, 64GB of RAM, 1TB of flash storage, and dual FirePro D700 GPUs, will set you back a cool $9599.

Multicore Is Where It's At

When we review a new Mac, we prefer to review the base model(s); then we buy one or more CTO models for benchmarking. This time, however, Apple lent us a CTO model configured with a 3.0GHz eight-core Xeon E5 processor, 32GB of RAM, dual D700 GPUs, and 512GB of flash storage. At Apple's online store, that configuration would cost $6799.

Our first benchmark test results for our review model are in some ways surprising: The eight-core 2013 Mac Pro was only 7 percent faster on our Speedmark 9 benchmark suite than a CTO 2013 iMac maxed out with a 3.5GHz quad-core Core i7 processor, a 3TB Fusion Drive, 8GB of RAM, and Nvidia GeForce GTX 780M graphics (a $2699 configuration). In the individual tests that make up our Speedmark benchmark, the iMac actually beat the new Mac Pro on a Finder test, the iMovie test, the iTunes test, the Aperture test, the Parallels test, and the Cinebench OpenGL test. It also beat the Mac Pro on GeekBench 3's single-core benchmark.

On the other hand, the new Mac Pro beat the iMac—and every other Mac—on

our benchmark suite's Final Cut Pro X test, the iPhoto test, the HandBrake test, the Photoshop tests, the Cinebench CPU test, the Mathematica test, and several graphics-engine tests. It also crushed most other Macs on GeekBench 3's multicore benchmark.

The Mac Pro finished the Final Cut Pro X rendering test in just half the time of the next-fastest Mac, and a quarter of the time of two 2012 Mac Pros. In an Apple demo, a Mac Pro running Final Cut Pro X displayed 16 angles of 4K Multicam video at once, while live-rendering 4K video with multiple complex effects applied.

When I used the new Mac Pro for basic real-world computing tasks, the system felt faster than the heavily upgraded 2010 iMac in my office. But when I played with filters on high-res video in Final Cut Pro X, and transcoded video using HandBrake, the new model really flexed its muscle. For example, HandBrake took just over 12 minutes to convert a 2-hour movie from a ripped .dvdmedia package to an H.264 file—as the computer simultaneously downloaded and installed 1.5GB of software updates, and I browsed the Web. On my 2.93GHz Core i7 iMac with Fusion Drive, the conversion took about 40 minutes.

On the Blackmagic Disk Speed Test, the Mac Pro delivered write speeds of 952.8 MBps and read speeds of 920.5 MBps—numbers similar to what Apple's latest Retina-display MacBook Pro (which also uses PCIe flash storage) recorded.

Performance Explained

With apps and tasks that can take advantage of multiple processor cores, gigahertz matters, but multicore matters as much or more. For apps and tasks that don't benefit from multiple cores, the processor's clock speed becomes more important. Thus, a 3.5GHz quad-core iMac beats a 3.0GHz eight-core Mac Pro at things like Finder and iTunes tasks, while the Mac Pro easily bests the iMac in Final Cut Pro X, HandBrake, Mathematica, and Photoshop.

That's probably why Apple touts the new Mac Pro for video editing, 3D modeling and animation, photography, design and layout, audio production, and science—areas of computing where multicore processors and/or high-end, high-resolution displays are crucial.

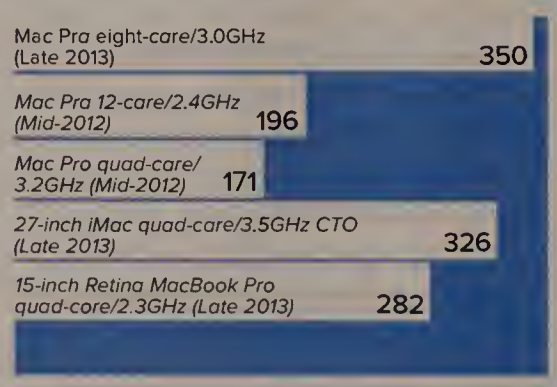
The latest Mac Pro should offer significant advantages over Apple's other computer models in sustained peak performance.

Similar to previous Mac Pro models, the latest Mac Pro should offer significant advantages over Apple's other computer models in sustained peak performance. Intel's current processors—including the Mac Pro's Xeon chips, and the Core i5 and i7 processors that other Apple computers use—have a Turbo Boost feature that can increase the clock frequency when additional computing performance is needed. However, the processor can ramp up its performance only if the CPU remains below its temperature, power-consumption, and current-consumption limits.

In desktop and laptop computers, the thermal design power (TDP)—the highest temperature the processor can reach before performance is restricted—is usually the limiting factor for Turbo Boost. The 2013 Mac Pro's Xeon processors have a TDP of 130 watts, while the TDPs of the i5 and i7 processors used in Apple's MacBook Air, MacBook Pro, Mac mini, and iMac lines range from 15W to 84W. The Mac Pro's unified thermal core also has much more cooling capacity than the tiny heat sinks and small fans in Apple's other computers. As a result, the Mac Pro can boost its processor cores for longer periods, which should markedly improve its sustained maximum performance.

Macworld Lab Test

Benchmarks: Speedmark 9



Results are scores. Higher results/longer bars are better.
Macworld Lab testing by James Galbraith and Albert Filice

TDP also explains why clock speeds on the Mac Pro drop as the number of cores increases: The 12-core Xeon processor used in the Mac Pro has the same TDP as the quad-core version, so the base clock speed must be lower for the 12-core CPU.

Unless you regularly use software that takes advantage of multiple cores or subjects your Mac's processor to sustained heavy loads, you're likely better off with an iMac or a MacBook Pro than with a Mac Pro. Those computers offer competitive single-core performance, often at higher base clock speeds, and are competitive on some nonsustained multicore tasks. Second, unless you'll regularly be tasking all the cores of a 12-core processor, you're better off with fewer cores running at a higher base clock speed.

Apple touts the 2013 Mac Pro's energy use. We measured the power draw of our eight-core 2013 Mac Pro versus a 12-core 2012 Mac Pro. With its stock hard drive, the 2012 Mac Pro drew 257 watts at startup, 147W at idle, 220W at sustained load, and 256W at peak. We noticed that the system's processors were being underutilized as the hard drive struggled to keep up, so we installed an OWC 480GB Mercury Accelsior E2 PCIe internal solid-state drive in the 2012 Mac Pro and switched over to it; the SSD helped eliminate the storage bottleneck and allowed the processors to work harder, boosting the sustained draw to 260W and the peak to 320W. The new Mac Pro drew only 156W at startup, and just 58W at idle; however, it drew approximately 330W under sustained load, and 367W at peak.

GPUs vs. CPUs

The 2013 Mac Pro also promises performance benefits in GPU computing. Many tasks don't require the graphics processing unit's full power, so some of its capabilities go unused. GPU computing allows applications, generally using Open Computing Language (OpenCL), to send

discrete instructions and calculations to the computer's GPU for processing. Today's GPUs are extremely fast, use many cores, and offer substantial data throughput, and they often can process more—but smaller—bits of independent instructions, in parallel, than CPUs can.

Since every configuration of the Mac Pro includes dual workstation-class GPUs, developers can count on having substantial GPU resources available. In fact, the Mac Pro connects all displays to one GPU, leaving the second unit available to focus exclusively on GPU-computing tasks. (Also, the second unit can power down when it's not being used for such tasks.)

Version 10.1 of Final Cut Pro X includes updates that take advantage of the 2013 Mac Pro's dual GPUs; Mathematica is designed to enable computers to get a dramatic boost from GPU computing. Any app that uses OpenCL and OpenGL should benefit from the Mac Pro's improved GPU-computing performance; and pro-level apps that don't yet use OpenCL will probably be updated to do so, now that developers can depend on significant GPU-computing resources.

Upgrade Inside, Expand Outside

The most controversial aspect of the new Mac Pro is its lack of traditional internal expandability. You can upgrade the RAM to 64GB; you can upgrade the built-in PCEe-based flash storage; and you can replace the removable GPUs—if Apple or a third-party vendor provides compatible GPUs with improved performance. To get to those components, you slide a small lock switch on the back panel, and slide the Mac Pro's aluminum shell up and off.

Inside, however, you won't find any PCI-card slots, empty hard-drive bays, or places to insert an optical drive. In contrast, the 2012 Mac Pro tower offered four hard-drive bays, two optical-drive bays, and four PCI Express slots; you could even add a RAID card.

Instead, the new Mac Pro supplies its array of external ports and connections on a panel in the rear. But rotating the Mac Pro to access the panel isn't always effortless: Unless your cables are long (and flexible) enough to let you turn the computer around, you'll have to reach behind it (or unplug the cables first), just as you had to with an older Mac Pro.

The new approach will create logistical and financial challenges for some users. Since the Mac Pro's internal storage tops out at 1TB, many pros will have to spring for external drives or for enclosures for existing drives. Other users will have to buy a Thunderbolt-based PCI expansion chassis to handle required PCI cards.

Thunderbolt 2 should deliver adequate performance for many such uses, however: Each Thunderbolt 2 port provides up to 20 gigabits per second of bandwidth to each connected device, and you can daisy-chain up to six devices on each port for a total of 36 external Thunderbolt

Concentrated Power
Behind this circuit board is the Mac Pro's processor, pressed tightly against the computer's thermal core (a central heat sink and ventilation system).

PHOTOGRAPHY BY ROBERT CARDIN

Take It Outside If you have any add-ons that you'd like to use with the new computer, you'll have to rely on the machine's Thunderbolt 2 and USB 3.0 ports (right) to make the necessary connections.

peripherals (including displays). Also, USB 3.0 is a less expensive option for connecting bulk storage in situations where performance isn't crucial.

Separating storage and other expansion peripherals from the computer significantly reduces size, heat, and noise. Pro users in recording and production studios are eager to get hard drives, RAID arrays, and other hot, noisy components away from the system and work area, Apple says.

I've come to appreciate many things about the new Mac Pro: It occupies no more space than one of my speakers. I can't hear it over the external hard drive under my desk. After a day's use, my office is no warmer. And I can shut the system down, unplug a few cables, and carry it to a new location with one hand.

As yet, few Thunderbolt peripherals are available, but more PCI chassis, RAID configurations, stand-alone drives, and the like are undoubtedly on the horizon.

Three 4K (or Pick Six)

The new Mac Pro offers strong display support. You can connect up to six non–4K DisplayPort displays, including any mix of Apple Thunderbolt Displays, Apple LED Cinema Displays, or third-party Mini DisplayPort displays. Or you can connect three 4K displays. Want to combine? The Mac Pro can handle, for example, one 4K display and four Mini DisplayPort displays. (The options differ slightly for Windows running via Boot Camp.) For best performance with two or three displays, Apple recommends connecting each to a different Thunderbolt bus; if you have more than three displays, avoid connecting more than two to a single bus. (The top two Thunderbolt ports on the left side are on one bus; the top two on the right side are on another; and the bottom two, along with the HDMI port, are on the third.)

The Mac Pro supports Display Port Multi-Stream Transport (MST), which allows you to use one connector to link multiple displays or—with some 4K displays—to use a single cable for a high-resolution display that previously required two DisplayPort connectors. (For displays that still use two cables, the Mac Pro can automatically detect which cable has the data for which half of the screen, if the display provides that information.)

Bottom Line

Ultimately, Apple's newest Mac Pro is a machine designed for professional users who require the strong multiprocessing functionality and the high-bandwidth capability that only a truly high-end computer can provide.

The big question for many professional users will be which Mac Pro configuration to purchase. Judging from what we've seen in our initial testing and from what we know about the various processors available, opting for more cores will pay off if you spend the majority of your time using multicore-aware applications. You should also benefit from upgrading the Mac Pro's GPUs to the D500 or D700 if you tend to use applications that take advantage of GPU computing.

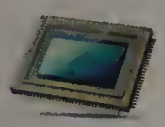
On the other hand, because the base clock speed goes down as the number of cores increases, you'll get better overall single-core performance with fewer cores. Fortunately, you can mix and match components to suit your apps and workflows.

Whatever configuration you create, one thing is certain: It won't be like any "pro" Mac you've ever used before.

PHOTOGRAPH BY ROBERT CARMAN

Shoot the next Hollywood blockbuster with the world's most amazing digital cinema camera!

The world's most mind blowing feature films, television commercials and music videos look amazing because they are filmed with digital film cameras! The new award winning Blackmagic Cinema Camera is unlike a regular video camera or DSLR camera because it's a true high end digital film camera! You get a true Hollywood cinematic look with 13 stops of dynamic range, interchangeable lenses, high quality RAW and ProRes® file recording plus much more!



Dramatically Better than DSLR Video

The Blackmagic Cinema Camera includes a large 2.5K sensor for super sharp images that eliminate resolution loss HD bayer sensors suffer from, while creating manageable files that are not too big! The large screen LCD allows easy focusing and the high speed SSD recorder lets you record in ProRes®, DNxHD® and RAW file formats for Final Cut Pro X and DaVinci Resolve!

Super Wide Dynamic Range

The Blackmagic Cinema Camera captures an incredible 13 stops of dynamic range so you can simultaneously capture the brightest highlights and the darkest shadows all at the same time into the recorded file! This means you capture more of the scene than a regular video camera can so you get more freedom for color correction for a feature film look! You also get a full copy of DaVinci Resolve!

Film Industry Quality

Every feature of the Blackmagic Cinema Camera has been designed for quality. With 2 separate models, you can choose from the world's most amazing EF or MFT lenses from crafters such as Canon™, Zeiss™ and more. For extreme high end work, you can shoot full 12 bit CinemaDNG RAW uncompressed files for incredible creative range in DaVinci Resolve color correction, as well as the world's best chroma keying!

Accessories Built In

High end cinema cameras often require thousands of dollars of extra accessories to make them work, however the Blackmagic Cinema Camera includes accessories you need built in! You get a large 5 inch monitor, super fast SSD RAW recorder and professional audio recorder all built in! You also get UltraScope software, used via the built in Thunderbolt™ connection, for on set waveform monitoring!

Blackmagic Cinema Camera

$1,995

Includes DaVinci Resolve Software

Learn more today www.blackmagicdesign.com/cinemacamera

Why Apple Included Maps in Mavericks

Google Maps is ubiquitous, but Apple had some good reasons to migrate its own Maps app to Mavericks.

BY CHRISTOPHER BREEN

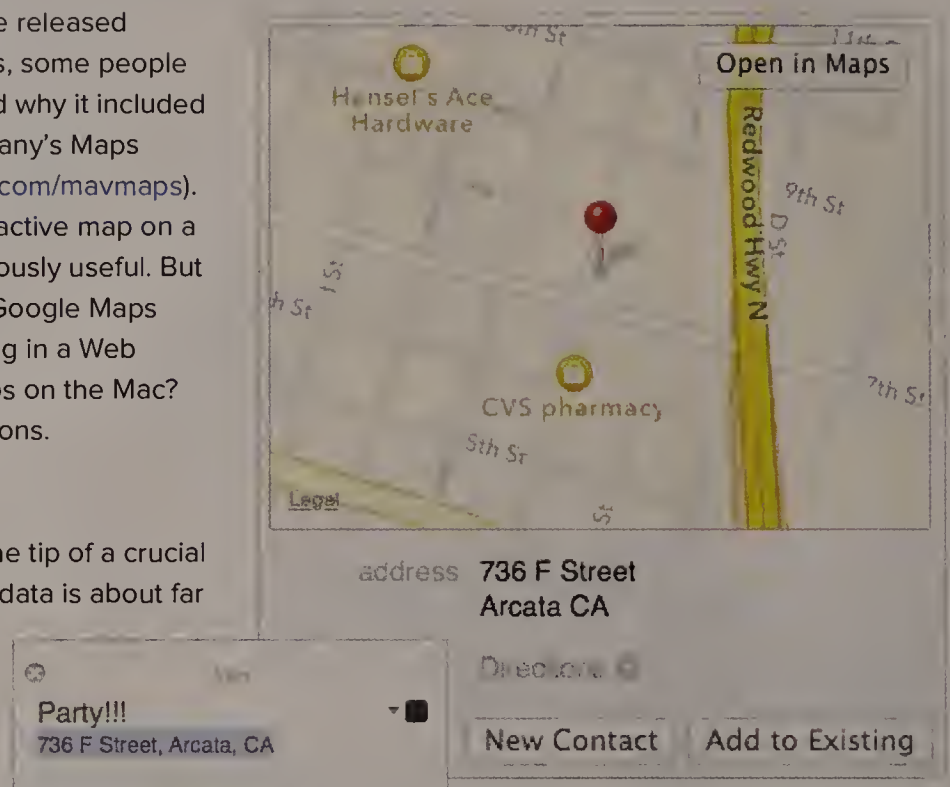
When Apple released Mavericks, some people wondered why it included the company's Maps application (go.macworld.com/mavmaps). Having access to an interactive map on a mobile device is tremendously useful. But computers already have Google Maps (maps.google.com) running in a Web browser—so why put Maps on the Mac? I can think of several reasons.

Integration

The Maps application is the tip of a crucial iceberg: integration. Map data is about far more than providing pretty pictures in a single application. It's also a way of sharing location information with other apps.

When you create an event and add a location in the latest version of Calendar, that app automatically searches for the location; if it finds that detail, it displays a small map at the bottom of the event's Edit window, with a red pin marking the spot and a summary of the current weather there. If you then click in the Add Alert, Repeat, or Travel Time area and click the Travel Time entry, Calendar displays the travel time to your destination, based on information supplied by Mavericks's built-in maps technology.

You can select an event that has a location attached to it, press ⌘-I to open the Info window, <Control>-click (right-click) the address, and choose *Show Address* from the contextual menu that pops up. A small map detailing that location will appear. From within this map you can view the location in the Maps app, click a button to view directions to the location within Maps, create a contact based on the address, or add it to an existing contact.



Thumbnail in Hand Right-click the address for a thumbnail map of your appointment location.

Similarly, Safari lets you select an address on a site, <Control>-click it, and choose *Look Up* [*nameofaddress*], and that same small map will appear with the same options.

Ditto in Contacts: When you hover your cursor over a street address, a gray Show Map link appears. Click that link, and Maps will launch and drop a pin on the location.

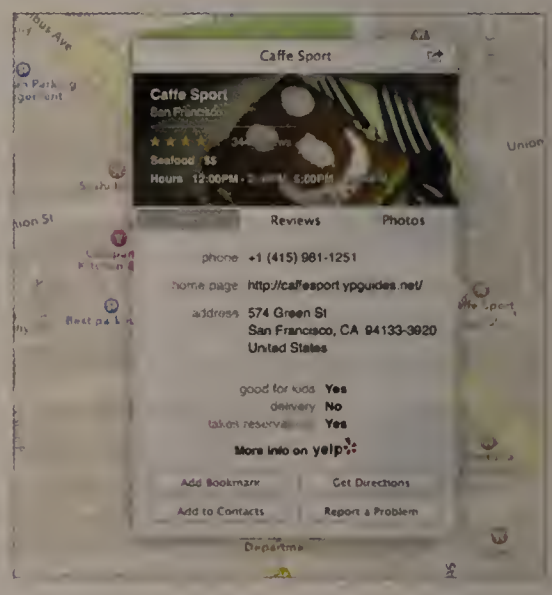
Sharing

Maps also offers many ways to share maps. In the Maps toolbar, click the Share icon and you'll spy any iOS devices running iOS 7 that are associated with your Apple ID. When you choose one, Maps will send the data you're viewing—whether it be a location or a set of directions—to that device, where it will appear as a notification. Tap the notification, and the mobile version of Maps will open on the device and display the information.

Points of Interest

In Google Maps or Apple's Maps, you first see the usual roads and overhead views. As you zoom in on either one, you also see points of interest—restaurants, service stations, businesses, parks, and museums. Clicking one usually produces an information window. In Apple's Maps, a flag provides the name of the location, a Yelp rating (if one is available), and the number of reviews the location has received.

Click the *Info* button in Apple's Maps to get important information about the location including its phone number, website URL, and street address, plus reviews and photos. Google Maps has much the same content, but Apple's version offers a bit more. From within its window, you can add a location to Maps' bookmarks, add it to your contacts, get directions, or send Apple a report about incorrect location information. Given the unreliability of some of Apple's mapping data, this last feature might be described as an unfortunate necessity.



Hunt and Gather Looking for a place to eat? Maps can help you pinpoint a destination.

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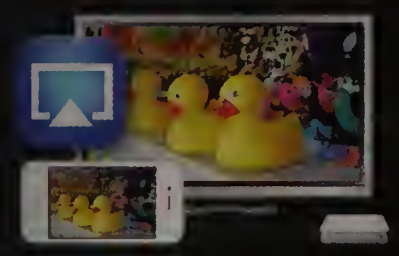

AirPlay - Use mobile devices to browse photos and play videos on TV via Apple TV.

Store photo albums on your personal cloud

Photo Station - Easily manage and share photos via email, social networking sites or secure sharing links.

Back up, share & enjoy your music collection

Music Station - Create and enjoy your personal music center in the cloud anywhere.

Inconsistencies Shake Consumers' Faith in Apple

Though its legions of longtime admirers would like to trust Apple, the company's actions sometimes fail to inspire such reliance.

BY LEX FRIEDMAN

When it comes to Apple, I'm a pretty trusting guy. I trust that the company will protect my data to the best of its ability. I trust that it will continue to release new iPhones, iPads, and Macs every year. But in several important ways, I don't trust Apple. And given how much I rely on the company, that's a problem.

Speechless Siri

At times, Siri saves my reminders almost instantly, and composes and sends my iMessages as fast as I can speak. Those are examples of technology at its best.

Other times, I get an infuriating canned response from Siri: "I'm really sorry about this, but I can't take any requests right now." Siri, like so much in life, is good only when it does what it's supposed to do.

Unfortunately, Siri sorrowfully shrugs off my requests far too often. The two times out of ten when Siri ignores my instruction are enough to make me question my continued reliance on it.

Feature Churn

If I were a spreadsheet nerd, I'd use Excel, not Numbers, because I can't count on Numbers, Pages, or Keynote the way I can on Microsoft's Office apps.

Apple has repeatedly revamped its marquee apps—and unceremoniously pulled beloved features. That happened with iMovie, Final Cut Pro, and (more recently) the iWork suite. And if Apple yanks a feature you use, the event can leave you with a Blu-ray-esque bag of hurt.

Say what you will about Microsoft, it doesn't pull features from its flagship apps. Microsoft Word's toolbars may eventually take up two-thirds of your screen, but you can bet your sweet bippy that the arcane feature you counted on in Word 2010 will still be around in Word 2013.

Send in the Clouds

I don't use iCloud to sync my calendar, my contacts, or my email. Instead I put my trust in—of all companies—Google. The reason is simple: Google has sync down cold, while Apple's track record is terrible.

I've heard too many friends (including numerous *Macworld* staffers) complain of borked bookmarks, duplicated contacts, missing events, and worse because they relied on iCloud. Sometimes iCloud works great for me, but other times a reminder won't sync until hours after I had scheduled it to remind me about something.

Trust Me

I'm a big Apple fan. When Google betrays my trust, I'm frustrated but not surprised. When I can't trust Apple, it's uniquely galling. I'm still waiting for the company to deliver on promises it made some time ago: Whither the FaceTime open standard? Where's the option to AirPrint directly to any printer?

I want to trust that Siri will perform my mundane task for me on the first try, and not attempt to placate me with hollow apologies. I want to trust that the features I depend on won't vanish from my apps. And I wish the confident "it just works" feeling I get when dragging a file into Dropbox would come over me when I save a document to iCloud. But I don't trust Apple as much as I'd like to.

I still believe that Apple aims to surprise and delight its customers, but I get the sense that the company is coasting. And though Apple can milk my loyalty for a long while, it can't be happy that when I want reliable calendar, contacts, and email services, I turn to Google. Or that I turn to Word far more often than to Pages when BBEdit won't suffice.

Thanks to its fantastic products and its focus on design, Apple can continue to coast for some time. But in the long term, it needs to examine the things it isn't doing right, and work on correcting them.

I've heard too many friends complain of borked bookmarks, duplicated contacts, missing events, and worse because they relied on iCloud.

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Vincent Versace, Nikon Ambassador: United States

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* QNAP TS-x70 Pro range; TS-470 Pro, TS-670 Pro, TS-870 Pro

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Now Available: USB Cables That Fit in Both Orientations

BY MICHAEL BROWN

No Upside-Down The electrical contacts at the host end of Tripp Lite's reversible USB 2.0 cables are in the middle of the shell.

The USB 3.0 Promoter Group has finalized a new type of connector for USB cables that will fit into your computer whichever way the cable is oriented. But if a USB 2.0 cable can handle the job, you don't have to wait: For several months, Tripp Lite has been shipping reversible USB 2.0 cables.

The connector on the host end of the cable is in the middle of the shell and has electrical contacts on both sides; the side of the cable that faces up when you plug it into your system doesn't matter. The end of the cable that plugs into the device you're connecting, however, still needs to be oriented a particular way. But the frustration that most people encounter is at the host end anyway—especially when they're trying to plug the cable into a USB port located on the back of a desktop system.

Tripp Lite sells 22 reversible USB 2.0 cables with reversible Type A male connectors on one end and various connectors on the other, including Micro-B male (used with many non-Apple smartphones), Type B male (commonly used with printers and some USB audio devices), and Type A female (for extension cables). Tripp Lite does not manufacture any of these cables with Apple's Lightning connector.

Cable lengths ranging from 3 to 10 feet are available with straight and right-angle connectors. Prices seem to be all over the map. ProVantage was recently selling a 3-foot reversible Type A male to Micro-USB B cable for $3.42; CDW was selling the cable for $8; and NewEgg was selling it for the princely sum of $12. TrippLite has a page of links to online merchants on its website (go.macworld.com/tripplitelinks) for easy comparison shopping.

If you don't find the convenience worth the premium price tag, you can pick up a generic 3-foot Type A male to Micro-USB B USB 2.0 cable at online retailers such as MonoPrice for less than a buck—and just put up with the urge to curse every time you try to plug in the cable the wrong way.

Macs: Current Lineup

PRODUCT	SPECS (STANDARD CONFIGURATION)	RATING	PRICE	DISPLAY	SPEEDMARK 9[1]	MORE INFO
DESKTOP						
iMac	Intel Core i5/2.7GHz (quad-core)	3½	$1299	21.5 inches	179	go.macworld.com/imac212713
	Intel Core i5/2.9GHz (quad-core)	n/a	$1499	21.5 inches	189	go.macworld.com/imac212913
	Intel Core i5/3.2GHz (quad-core)	n/a	$1799	27 inches	211	go.macworld.com/imac273213
	Intel Core i5/3.4GHz (quad-core)	n/a	$1999	27 inches	235	go.macworld.com/imac273413
Mac Mini	Intel Core i5/2.5GHz (dual-core)	4	$599	Not included	n/a	go.macworld.com/mini2512
	Intel Core i7/2.3GHz (quad-core)	4	$799	Not included	149	go.macworld.com/mini2312
Mac Pro	Intel Xeon/3.7GHz (quad-core)	n/a[2]	$2999	Not included	n/a[2]	go.macworld.com/macpro3713
	Intel Xeon/3.5GHz (six-core)	n/a[2]	$3999	Not included	n/a[2]	go.macworld.com/macpro3513
PORTABLE						
MacBook Air	Intel Core i5/1.3GHz, 128GB	4½	$999	11 inches	143	go.macworld.com/air1281113
	Intel Core i5/1.3GHz, 256GB	4½	$1199	11 inches	143	go.macworld.com/air2561113
	Intel Core i5/1.3GHz,128GB	4½	$1099	13 inches	142	go.macworld.com/air1281313
	Intel Core i5/1.3GHz, 256GB	4½	$1299	13 inches	142	go.macworld.com/air2561313
MacBook Pro	Intel Core i5/2.5GHz (dual-core)	3½	$1199	13 inches	n/a	go.macworld.com/macbook132512
	Intel Core i5/2.4GHz (dual-core), 128GB	4	$1299	13-inch Retina	155	go.macworld.com/macbook1312813
	Intel Core i5/2.4GHz (dual-core), 256GB	n/a[2]	$1499	13-inch Retina	168	go.macworld.com/macbook1325613
	Intel Core i5/2.6GHz (dual-core)	4¼	$1799	13-inch Retina	177	go.macworld.com/macbook132613
	Intel Core i7/2.0GHz (quad-core)	3½	$1999	15-inch Retina	n/a[2]	go.macworld.com/macbook152013
	Intel Core i7/2.3GHz (quad-core)	4½	$2599	15-inch Retina	282	go.macworld.com/macbook152313

[1]Speedmark 9 is Macworld Lab's standard test tool for benchmarking systems running Mac OS X 10.8 (Mountain Lion). For more information, see [illegible] [2]Not yet tested

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For Product Highlights

Apple Snaps Up Topsy, PrimeSense

Acquisitions reflect interest in Twitter access, 3D sensing technology.

BY ZACH MINERS AND JOHN RIBEIRO

Apple recently acquired Topsy, a social media analytics company that studies a range of data from Twitter, and PrimeSense, a developer of 3D sensors that let devices respond to the environment in three dimensions.

According to the *Wall Street Journal*, Apple paid more than $200 million for Topsy, and the *Calcalist* (an Israeli newspaper) reported that Apple would spend $345 million for PrimeSense.

Topsy provides software for making sense of data across the social Web and divining consumer sentiment. For example, marketers can use Topsy's tools to measure the success of ad campaigns, identify thoughts and opinions over time, and search and analyze hashtags across years of online chatter.

Topsy is one of the few companies (DataSift and Gnip are two others) with access to Twitter's "firehose"—the complete stream of tweets that users post to the service. As a result of this arrangement, the company has a huge amount of Twitter data at its fingertips.

In September 2013, Topsy announced that it had indexed Twitter's entire archive of public tweets dating back to 2006. That data could improve Apple's use of online social activity in its product development.

After Apple acquired PrimeSense, an Apple spokesperson emailed a statement declining to explain the company's views: "Apple buys smaller technology companies from time to time, and we generally do not discuss our purpose or plans."

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US Patent D583,041

PrimeSense technology served to power the Kinect motion-sensing input device for Microsoft's Xbox 360 game console.

Sensor Sensibility

PrimeSense said in November 2013 that 3D-printing company 3D Systems was using its sensor for the latter's new 3D scanner called Sense.

PrimeSense's sensors have applications in areas ranging from retail sales to healthcare, giving Apple a number of options for deploying the technology in its products. The small Capri sensor, for example, is designed for integration with mobile phones, televisions, tablets, and PCs.

Founded in 2005, PrimeSense has operated as a fabless semiconductor company. Its technology powers more than 24 million devices around the world, permitting natural interaction between people and devices and between devices and their surroundings, according to the company's website.

Apple Awarded $290 Million in Samsung Suit

BY MARTYN WILLIAMS

For infringing on several Apple patents in designing multiple Samsung smartphones and tablets, a jury in the U.S. District Court for the Northern District of California has ordered Samsung to pay $290 million.

The damages represent the full amount of lost profits and royalties that Apple had claimed as well as most of the cut of Samsung's profits that it had demanded.

With this latest verdict included, Samsung now owes Apple about $930 million.

During the five-day trial, Apple said that it would have sold hundreds of thousands more iPhones if not for Samsung's infringement, and therefore that Samsung owed it hundreds of millions of dollars in profits reaped from sales of infringing devices.

Jurors said they awarded Apple the $114 million that it claimed in lost profits, an extra $35 million it wanted in reasonable royalties, and $142 million from Samsung's profits.

Samsung had argued that it had made far less money on infringing phones than Apple claimed, but the jury felt Samsung didn't support its claim persuasively.

Patent Pounding Jury forewoman Colleen Allen speaks to reporters outside a federal courthouse following the Apple v. Samsung verdict.

Elevate II: Nikki, an Anthro Web Designer, adjusts her worksurface as high as 47" for standing or as low as 28" for sitting – with the simple push of a button.

A 30-YEAR-OLD FAD.

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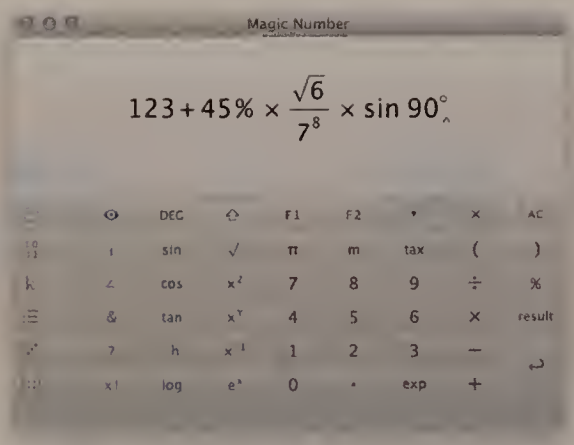
Hot Stuff

What We're Raving About This Month

My Passport Air

The $150 My Passport Air is a 1TB external hard drive designed to complement the MacBook and MacBook Air: It comes in an aluminum enclosure and includes USB 3.0 compatibility. The device is powered, in fact, by the Mac's USB port, and it's compatible with Apple's Time Machine backup feature (wd.com).—JOEL MATHIS



Magic Number 2.0

People rarely start their day thinking about equations and formulas; but if you do, you'll appreciate Seed's $2 Magic Number, which creates beautifully formatted mathematical expressions and computes their results with ease. The app supports most common math operations that a scientific calculator can perform, and it provides a range of formatting options (magicnumber.me).—MARCO TABINI

Most Powerful EyeBattery

QuickerTek's $500 Most Powerful EyeBattery weighs 2.2 pounds and is made from anodized aluminum, so you might want to strap one to your chest if you ever get into a gunfight at noon. More practically, you'll be able to keep your MacBook Air running for an additional 23 hours if you ever find yourself computing in an isolated, power-deficient location (quickertek.com).—JOEL MATHIS

StorageStatus 1.0

As the speed of protocols such as USB and Thunderbolt continues to increase, external storage is becoming more and more popular. Enter developer Ethan Bell's $3 StorageStatus, which helps you keep tabs on everything connected to your Mac. In addition to providing important information about each device, the app lets you know when your external drives are in sleep mode, so you can monitor their power usage (go.macworld.com/storagestatus).—MARCO TABINI

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AUDIO

Muse 2.0

★★★★; $5; Industrious One; industriousone.com

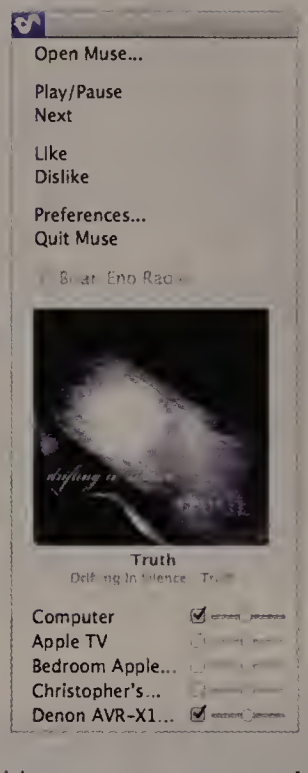
If you love Pandora, an outlay of $5 and a Mac lets you use Industrious One's Muse, a desktop Pandora player that offers all the Pandora goodness of the Web browser version and a worthwhile bit more.

When you first launch Muse, you see a window that serves as a container for Pandora's website, with your stations, the New Station field for adding more stations, playback controls, thumbs-up and thumbs-down buttons, and any other elements Pandora puts on the page (including ads).

But with Muse, you no longer need to keep your Web browser running to listen to Pandora. And the music continues to play when you close Muse's window.

You can assign keyboard shortcuts to such commands as Play/Pause, Next Song, Like Song, and Dislike Song. And these shortcuts work regardless of which application is front and center. You can also create shortcuts for showing or hiding the Muse window, and for showing an alert box with (by default) the name, artist, and album of each track as it begins playing.

You can channel Muse's output to any or all AirPlay devices on your network. Click the *AirPlay* button in the top-right corner of the Muse window, or click Muse's systemwide menu, to see a list of available AirPlay devices. You can then enable devices and adjust the volume for each one to suit your needs.



If you sign in to Last.fm via Muse's preferences, with Last.fm's scrobbling feature enabled, it will add any tracks you play to your Last.fm profile. You can opt to share this data with your friends or use it to track your listening habits.

One version of Muse is available from the Mac App Store (go.macworld.com/muse), and the other is from Industrious One's site (industriousone.com/muse). The direct version lets you use your Apple keyboard's media keys (<F7>, <F8>, and <F9>) for Previous, Play/Pause, and Next, respectively. Both Muse versions respond to Apple's hardware remote controls, too.—CHRISTOPHER BREEN

AUDIO/PRODUCTIVITY

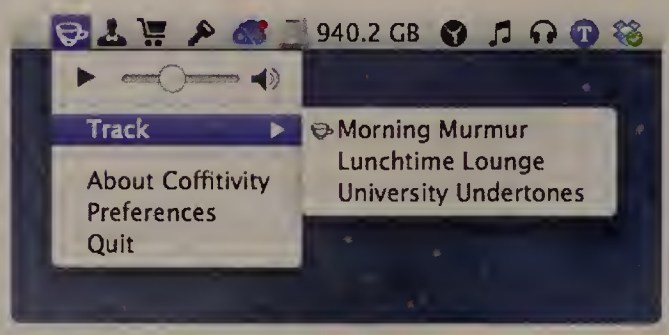
Coffitivity 1.0.1

★★★★½; free; Coffitivity; coffitivity.com

Working at home can be hard when the silence becomes oppressive. If you miss the sounds of other people, let the free Coffitivity (go.macworld.com/coffitivity) perk things up with the sounds of a busy coffee shop.

The app offers three appealing soundscapes: Morning Murmur, Lunchtime Lounge, and University Undertones. The mixes blend shop background noises—cash registers, coffee brewing, plates clinking, and the like—with unintrusive snippets of conversation.

Those little bits enrich the background noise without ever becoming annoying—I never found myself distracted by the snatches of idle chitchat, even though that often happens to me in an actual café environment. Still, I wish the app had a fourth option ("Quiet Quarters," maybe?) for library-like noise levels—page turns and coffee-cup clinks, but no chatting.



The app couldn't be much simpler to use. A tiny coffee cup sits in your menu bar; click it to pause or play the Coffitivity sounds, adjust the volume of those sounds (this volume level is separate from your computer's master volume, so you can listen to music, too, if you prefer), and choose the desired soundscape. The simple preferences window lets you launch the app automatically at startup; and you can start or stop Coffitivity's audio whenever you want, simply by clicking the app's systemwide menu-bar icon.

If a little background noise would raise your comfort level and sharpen your work focus, try Coffitivity.—SERENITY CALDWELL

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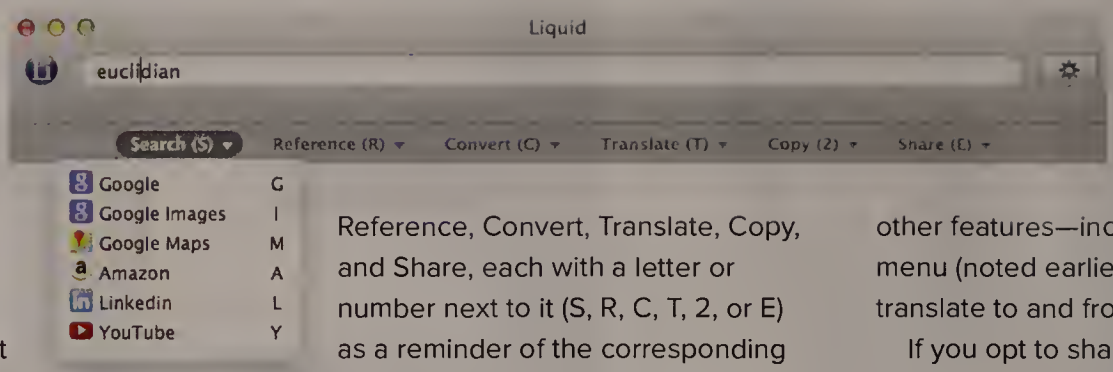
PRODUCTIVITY

Liquid 4.3

★★★★½; free, but $3 in-app purchase unlocks all features; Liquid OS X; liquid.info



Think about how much time you spend dealing with chunks of text, big and small: search queries you type into Google, words and phrases you look up on Wikipedia, and text blocks you copy from one app and paste into another. Liquid (go.macworld.com/liquid) makes performing those tasks a whole lot easier.

Launch Liquid, and it sits quietly in the menu bar until you need it. Select a bit of text in an app, on a website, or wherever, and press Liquid's keyboard shortcut. Up pops a window containing your selected text along with six menu options: Search, Reference, Convert, Translate, Copy, and Share, each with a letter or number next to it (S, R, C, T, 2, or E) as a reminder of the corresponding keyboard shortcut—for example, pressing S opens the Search menu.

Each menu contains related actions. Search, for example, contains Google, Google Images, Google Maps, Amazon, LinkedIn, and YouTube. Each option has a keyboard shortcut listed in the menu; press the letter for the desired action to perform it. Thus, for example, you can select a bit of text, and press ⌘-<Shift>-2, S, G to initiate a Google search for the selected text.

A $3 in-app purchase unlocks other features—including the Translate menu (noted earlier), which allows you to translate to and from over 32 languages.

If you opt to share selected text, you can use the left or right arrow key, while you're in Liquid's dialog box, to move the cursor to the beginning or end of your selected text. From there, you can add a comment to your text before sharing it. Liquid also lets you run a Google search on a text block by selecting text, pressing the Liquid shortcut, and pressing <Enter>.

For people whose workflow involves text, Liquid is a great utility.—DAN MILLER

EMAIL UTILITY

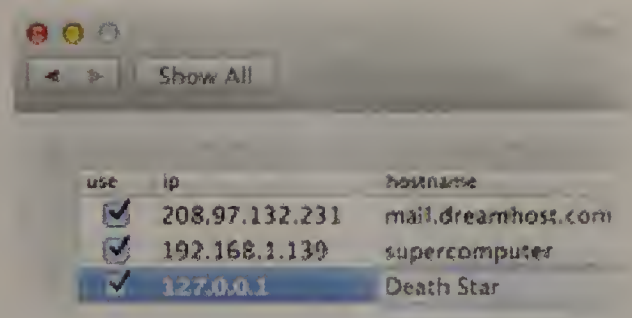
Hosts 0.1.3

★★★★; free; Lars van de Kerkhof; permanentmarkers.nl/software.html

I recently had a problem with one of my mail accounts. The account, provided by Dreamhost, was on a mail server named one thing ('mail.doombot.com'), but was secured with a certificate for a different mail server ('mail.dreamhost.com'). So every time I opened Mail, I got an error saying the two certificates didn't match.

Fixing such problems involves editing a file on your drive called *hosts*, located in the hidden /private/etc folder. That's where Lars van de Kerkhof's free Hosts system preferences pane comes in.

The hosts file is essentially a local override for the Domain Name Server system. DNS translates nice, pretty website addresses (like macworld.com) into their hard-to-remember, IP-address equivalents (say, 70.42.185.230). The hosts file lets you override the DNS system for particular addresses or ranges of addresses. You enter the necessary information in the file, but doing so is normally a hassle.

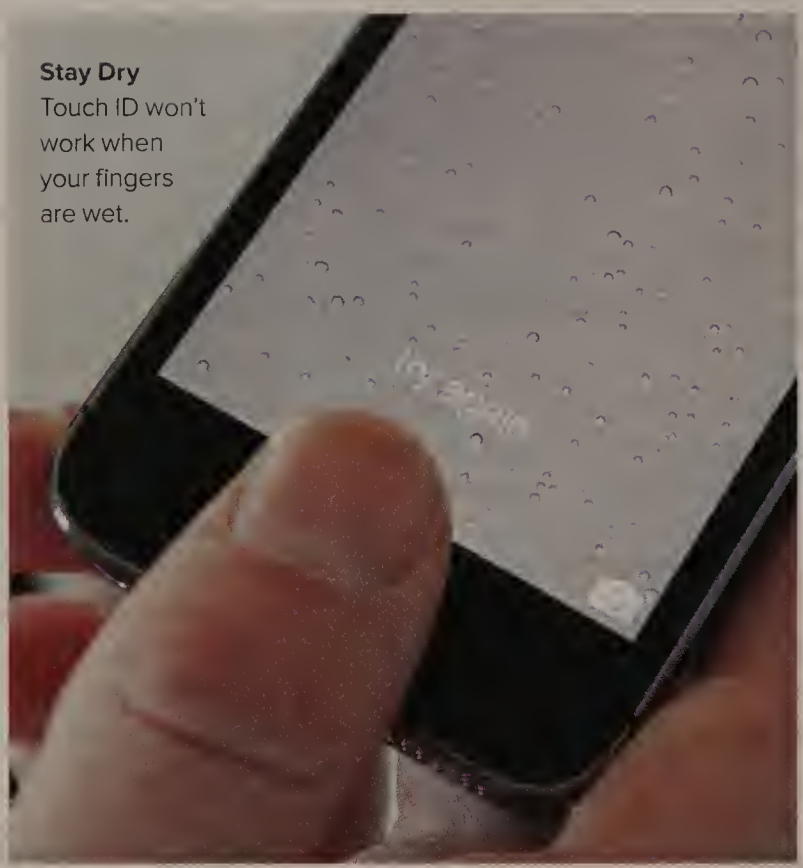


The Hosts preference pane makes this operation much easier. First, click the padlock icon and enter an admin-level username and password for access to the hosts file. Then add a new host/address pair: Click the plus (+) button, enter the IP address you want to route to, and enter the hostname you'll use for that address. To edit an existing entry, double-click it; to remove an entry, select it and click the minus (-) button. If you'd like to disable a specific entry temporarily, simply uncheck the box next to it.

Hosts takes care of all the DNS refreshing, so a hostname entry is active (or disabled, as the case may be) as soon as you finish editing it. Hosts also creates backups of your hosts file before and after you make edits, in case something goes wrong. And to prevent you from inadvertently mucking up your network connections, Hosts hides OS X's default hosts-file entries.—DAN MOREN

iOS Central

The Latest on the iPhone, iPod Touch, iPad, and App Store



Stay Dry Touch ID won't work when your fingers are wet.

Right Angle Place your thumb in a natural position.

Troubleshoot Apple's Fingerprint Reader

Here are some common scanning problems—and our solutions.

BY SERENITY CALDWELL

There has been much discussion of troubles with Touch ID ever since Apple unveiled it with the release of the iPhone 5s last fall. (See *Feedback* on page 10 for a few reader comments.)

Touch ID certainly isn't perfect: As someone who has been using it since I got my iPhone 5s on launch day, I've experienced my fair share of frustration—especially because I swapped out my simple four-digit passcode for a multicharacter alphanumeric version.

But despite its occasional malfunctions, Touch ID has become one of my favorite iPhone features. To make sure it remains one of your favorites, too, here are a few tips and tricks I've discovered to keep Touch ID working properly, as well as some advice about when you shouldn't use it.

Start With a Good Scan

In the days after I first offered up my prints to Touch ID, I found myself wondering if my fingers simply weren't cut out for this whole biometric scanning thing: I would frequently have to scan my thumb two or three times to get the phone to unlock. The sensor usually got it by the third try, so I figured the problem was my inexperience with the new technology. But as the weeks wore on, I ended up having to manually type in my code half of the time—enough that I got fed up with it.

Adjust your grip: When I went to rescan my prints, I had a realization. I had previously scanned my thumb straight up, with my nail pointing toward the top of the iPhone, but I rarely hold my device that way. Instead, I point my thumbs at a 45- to 90-degree angle when gripping my phone.

This time when I scanned, I carefully avoided placing the iPhone flat on a table and scanning my thumb as if I were being fingerprinted. Instead, I attempted to replicate the way I actually hold my smartphone. This approach completely changed the experience of Touch ID for me. After a week of using the new saved thumbprint, I've encountered fewer than ten errors—a good deal better than my previous experience.

This might be the only piece of scanning advice you need, but if you find you're still having difficulty, there are other options.

Scan in multiple fingerprint angles: Touch ID stores up to five prints, and given that my 5s is mine and mine alone,

PHOTOGRAPHY BY MICHAEL HOMNICK

I've used those print stores to capture multiple versions of my thumbprints—I've scanned each thumb once angled at 60 degrees, and a second time pointing straight up. Storing multiple versions of your print ensures that even if your grip is a little different each time you hold down your thumb, Touch ID should still recognize it.

Use a different finger: If you have a mark or cut on your thumb that makes fingerprint analysis and reading difficult, you may have to retire that finger from Touch ID use and instead try one of your other digits.

Make sure your finger touches the metal ring: The steel ring around your Touch ID sensor isn't just there for its good looks—it actually helps the scanner recognize your print. For this reason, if you don't make contact with it when you try to open your phone, you may have some trouble.

When Touch ID Doesn't Work

Even if Apple's fingerprint sensor works well for you 90 percent of the time, that probably just makes it all the more frustrating when it messes up. Here are several situations where Touch ID may be less effective than your good old-fashioned passcode.

When it's cold outside: Are you finding that your iPhone doesn't really like your touch when you're cold? Touch ID's technology may be to blame: When checking your finger against stored information, the sensor scans both your fingerprint and the underlying layer of skin, called your subdermis.

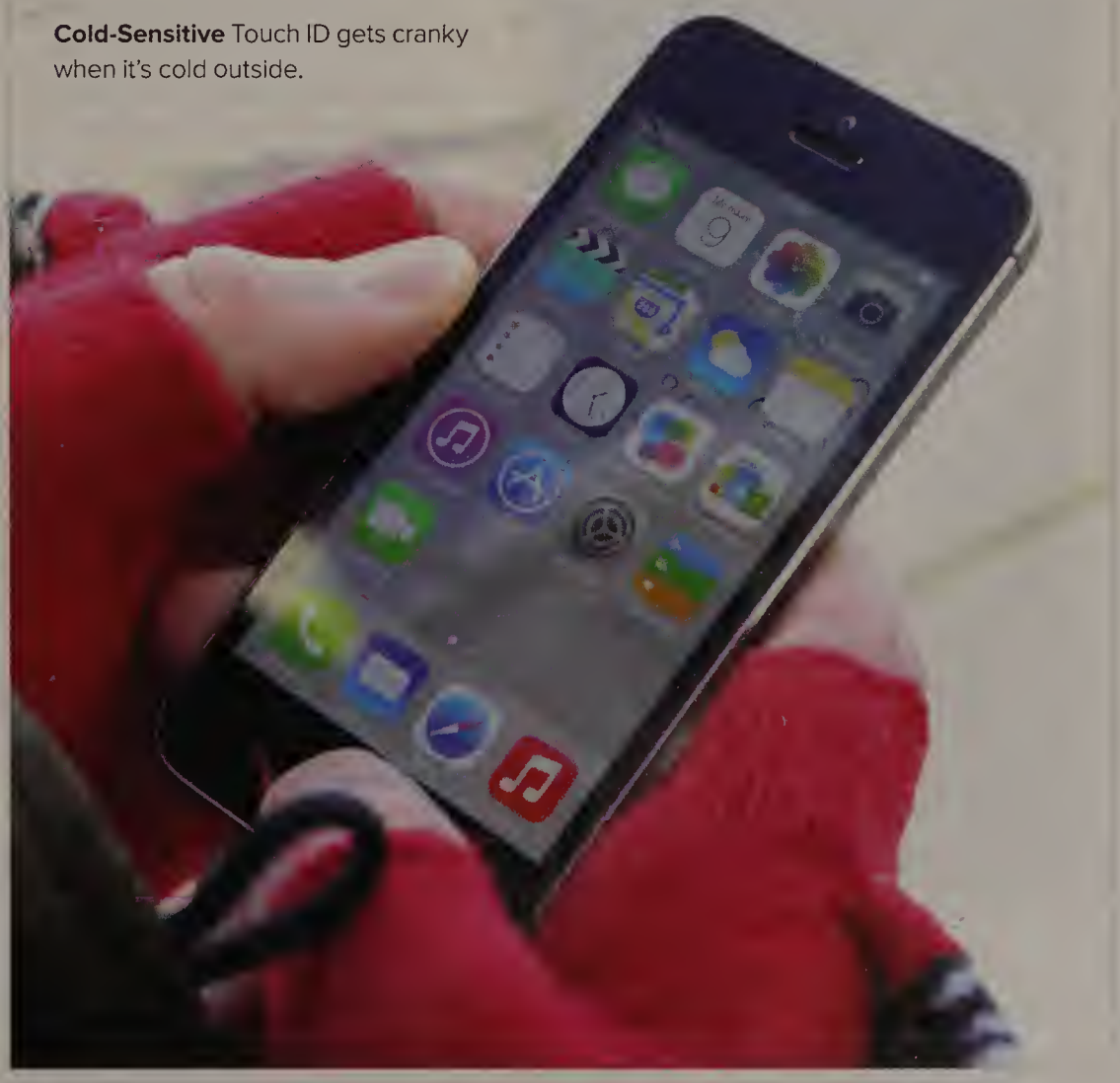
In order to do this, the sensor looks to see if your finger can conduct electricity and heat. (Yes, this means that a super-villain cannot chop off your finger and then use it to access the top-secret information on your gadgets.) If your digits have been out in the cold, however, they'll register as less conductive on the scanner, and that may prevent Touch ID from letting you in.

When your fingers are wet: While we as a society may have given up on the concept of avoiding using computing devices in the bathroom, it turns out that the iPhone still has some decorum. If you attempt to use Touch ID while your fingers are damp or after you've been in the shower, the sensor often won't recognize your print—either because the water residue is interfering with the scan or your finger has absorbed too much water, giving you "raisin fingers" (and a slightly different-looking print than the one you recorded on your phone). Besides, keeping your device away from dripping digits also reduces the chance that your iPhone will get wet.

When you trigger security overrides: You won't be able to unlock your phone with Touch ID if you fail a thumb scan more than five times, if you restart the phone, if you haven't unlocked the device in more than 48 hours, or if you need to access the Touch ID & Passcode setting. This hindrance is actually designed for your security. It prevents would-be thieves from getting into your device by repeatedly trying to spoof your fingerprint (or scanning in a new one without your permission).

When the sensor is dirty: Like any scanner that's regularly exposed to the elements, your Touch ID sensor may occasionally pick up dust, dirt, and other unwanted particles. According to a support document from Apple, a clean lint-free cloth should take care of most junk; if you find yourself unable to clean your sensor, though, you may have to take it to the Apple Store and see if it has been permanently damaged in some way.

> I had previously scanned my thumb straight up, with my nail pointing toward the top of the iPhone, but I rarely hold my device that way.



Cold-Sensitive Touch ID gets cranky when it's cold outside.

iBeacons Brings Hyperlocal Selling to Apple Stores

BY JOEL MATHIS

Walk into an Apple Store from now on, and your phone might start trying to sell you those earphones you've been longing for. Apple's new iBeacons system is part of an apparent attempt to expand in-store sales.

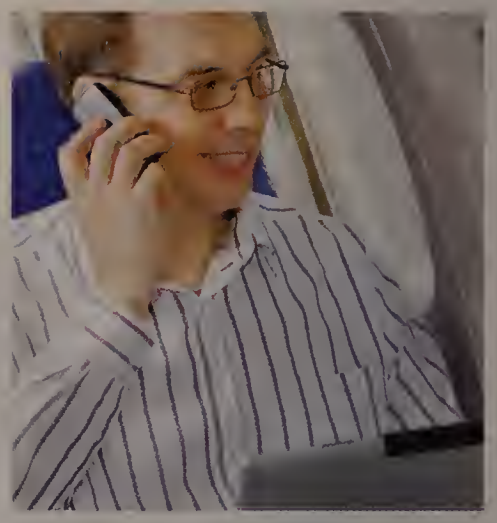
New in iOS 7, iBeacons is designed to work with Apple's official Apple Store app. It detects your location in the store, and if you walk near the accessories, for example, your smartphone will send you a push notification inviting you to take a closer look at the merchandise.

I attempted to test iBeacons at the Apple Store in Center City Philadelphia. That store has three iBeacons locations, but I never quite made it work. For compatibility with iBeacons, you need an iPhone 4s or later or a third-generation iPad or later. However, my attempts to make the system work on my iPad mini failed, suggesting that the feature might not be entirely ready for prime time.

Enabling the system requires you to jump through a series of hoops in the phone's settings. When you download the Apple Store app, you'll want to make sure that push notifications and location services are enabled, both for the app and for iOS as a whole. Next, you'll need to go to the phone's *General* settings and make sure the *Background App Refresh* option is enabled for the Apple Store app. After that, you must make sure your phone's Wi-Fi is on and then connect to the Apple Store's Wi-Fi network. Finally, you'll want to turn on the phone's Bluetooth, because iBeacons relies on low-energy Bluetooth 4.0 technology to sense your proximity to the wares Apple wants to sell you.

Add it all up, and that's quite a series of steps you have to take just to let Apple broadcast what is essentially location-aware advertising to you. And security-conscious iPhone users, in particular, might balk at the number of ways that they have to open their phone up to detection.

Location Aware The Apple Store app can already recognize what store you're in; iBeacons helps expand its location-based selling options.



FCC Proposal Would Allow Midflight Calls

BY FLORENCE ION

As if shrinking seats, hidden fees, and being trapped inside a metal tube with a bunch of strangers weren't bad enough, the Federal Communications Commission has issued a proposal that will make flying even more unpleasant than it already is.

The agency convened a meeting in December to discuss allowing passengers to make phone calls and use cellular data while in the air. According to the *Wall Street Journal*, phone use would still be restricted during takeoff and landing, but anyone on the plane could make a phone call or, for example, check Twitter after the plane reaches 10,000 feet.

The FCC proposed a similar idea back in 2004, but it faced objection from a number of groups and withdrew the proposal three years later, citing a "lack of technical information upon which we may base a decision." Airlines seem to be split on the idea, with Delta Air Lines, for example, telling the *Wall Street Journal* that it is vehemently opposed to the proposal, and JetBlue Airways stating that it would consider reevaluating its current policy.

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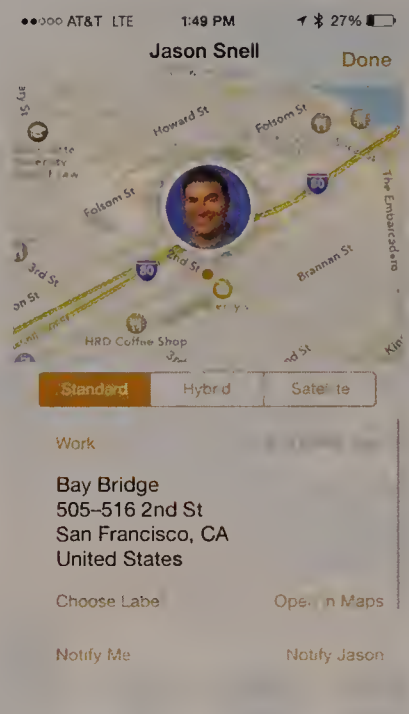
Find My Friends Ditches Stitched Leather

BY DAN MOREN

Bid adios to stitched leather, friends who like to find other friends. Apple has released an update for the Find My Friends application, giving it an iOS 7–style makeover that brings it in line with the company's other apps, including Remote, Podcasts, Find My iPhone, and iBooks.

The origins of Find My Friends' fetish for stitched leather are lost in the mists of time, but it's rumored that Steve Jobs himself was a fan of the skeuomorphic texturing.

The new aesthetic forgoes such flourishes for a more straightforward design, one that features a largely white interface with sparse color highlights.



Friend, Found: Apple's iOS 7 update of the app has not a trace of stitched leather in sight.

Upon launch, a map displaying your friends' locations takes up most of the screen. Gone in this update are the dots representing your friends; now you'll actually see their circular contact pictures on the map. Tap on any of those pictures, and the circle will expand to show a larger image of your friend. In addition, a toolbar slides down from the top, showing you their location's label and when they were last pinged, as well as options to display their contact information, set up geofencing notifications, and more.

All of the features of Find My Friends that you know and love remain intact in this update, which is largely an aesthetic revamp, though you may find some features in different locations than in iOS 6.

Apple Store iPad App Debuts, Finally

BY DAN MOREN

Buying Apple products from your iPad just got much easier. More than three years after the company released an Apple Store app for the iPhone, an Apple Store app for the iPad has arrived.

Shopping options for the Mac, iPad, iPhone, and iPod are prominently displayed. Once you've made your choice, you can place your order, set your delivery options, and check the availability of your selected product on a handy map interface.

You'll also see a heading for viewing information about the Apple retail stores; this section lets you quickly find nearby retail locations, make Genius Bar reservations, and view schedules of events.

Gestures are supported as well. You can swipe through the galleries of high-quality images, and pinch to zoom in on most products in the main grid.

Because the iPad version is different from the iPhone version, you won't see it as an update to the existing Apple Store app; instead, you'll need to install it separately.

For the most part, though, the Apple Store app is precisely the kind of elegant shopping experience Apple already brings to its retail and online stores—just designed for the iPad.

What's New at the App Store

The Elements in Action

The Elements in Action ($4; go.macworld.com/elements) features beautifully filmed videos that explore and explain what makes each individual element in the periodic table of elements unique. To illustrate mercury, for example, it shows how a heavy cannonball floats weightlessly on top of a bath of ultradense mercury.—JOEL MATHIS

Inbox Cube

Inbox Cube (go.macworld.com/inboxcube) is a free email client for Gmail, Yahoo, iCloud, and AOL. It divides the components of email into "cubes"—one cube features just messages and their text; swipe over the cube, however, and you'll see the Attachments cube, where you can visually find and sort through all sent and received attachments in one place.—JOEL MATHIS

Awesome Note for iPad

Awesome Note for iPad (go.macworld.com/awesome) ambitiously touts itself as an "all-in-one life organizer," having added calendar options and the ability to sync with Evernote and Google Drive. The latest update also gives the app that iOS 7 sheen, and now offers unified management of your reminders and calendar in a single screen so that you can control your schedule and tasks efficiently.—JOEL MATHIS

Clumsy Ninja

In this game (go.macworld.com/clumsy), you take control of the Clumsy Ninja as he searches for his missing girlfriend, Kira, and aid his quest by training, tickling, and even tying balloons to him—everything you do helps him improve his skills. The game is free, but in-app purchases range from $3 to $30.—JOEL MATHIS

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App Guide

Software for Your iPhone, iPod Touch, and iPad

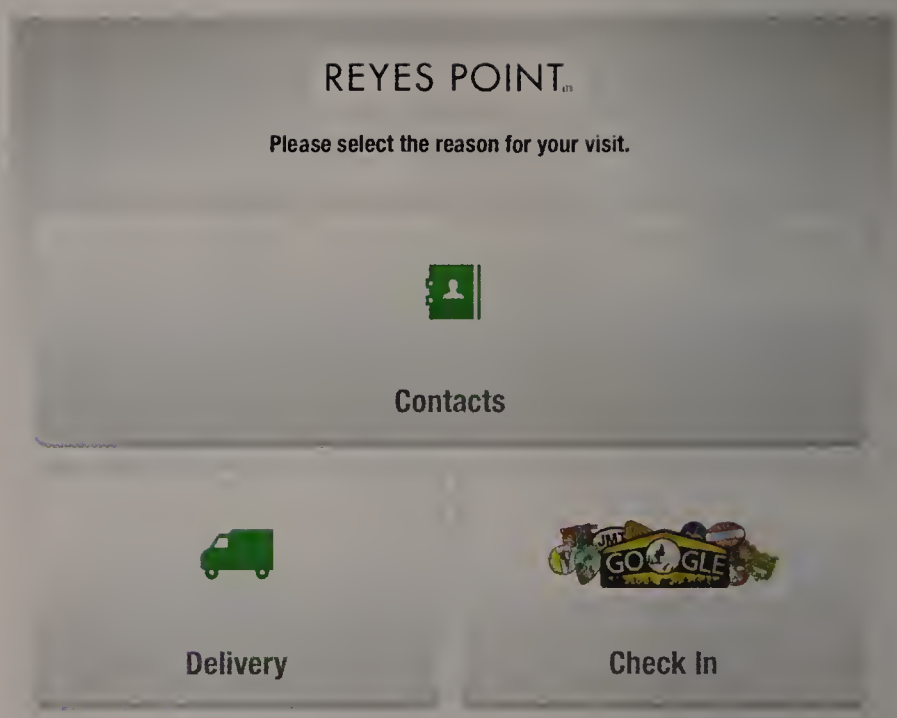
Receptionist for iPad

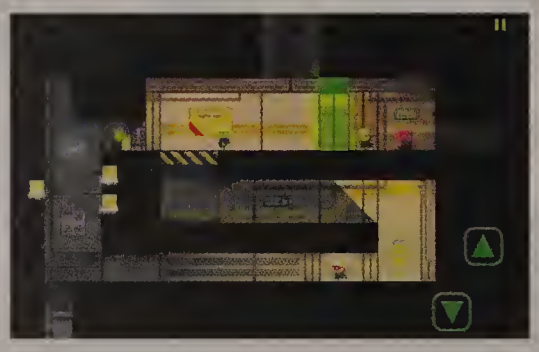
PRODUCTIVITY TextUs.Biz's Receptionist (go.macworld.com/receptionist) gives companies a computerized system for handling clients, vendors, and delivery people when they arrive at the front desk.

Once you enter administrative information and customize the system with your company's logo, audio message, and list of contacts, you publish the data to make it available to the app. Visitors use the iPad as a kiosk to check in and announce their arrival by specifying the person they want to see. The system then notifies that employee.

After a free 30-day trial, an account costs $49 per month for up to 24 contacts, unlimited messages, and visitor logging on one iPad; for $249 per month, you get all of the above plus 100 or more contacts and multiple-iPad support. I found updating info a bit kludgy, but Receptionist is still a great option for receptionist-free offices.—JEFFERY BATTERSBY

iPad | ★★★½; Free app; requires account ($49 to $249 per month); Text Us Services





Stealth Inc.

GAMES *Stealth Inc.* (go.macworld.com/stealth) is a puzzle-platform game in which you control disposable clones to tackle the game's seemingly impossible lethal levels.

It's essential in each level to first work out which door, elevator, or trapdoor each button or computer console activates, and then determine the best route to the exit.

Stealth Inc. is a quiet little masterpiece: tricky, funny, and great-looking. But expect a fair bit of frustration, too.—DAVID PRICE

iPhone/iPad | ★★★★½; $5; Curve Digital Games

Grilly the Cheese for iOS

GAMES In Piasa's *Grilly the Cheese* (go.macworld.com/grilly) side-scrolling runner game, you play as a grilled cheese sandwich that has left its home—no explanation as to why. Grilly is just happy to roam about, collecting treasures along the way.

The controls in *Grilly the Cheese* are very easy. Tap on the screen to jump, and tap again to jump even higher. As Grilly runs into obstacles, jumping is the way to avoid them. The main item to collect is coins, which you can redeem for power-ups that assist you during the game, or accessories to dress Grilly up.

The game is free, but buying coins will cost you. It's easy enough to collect coins, however; after ten minutes of play, I already had several hundred coins that I used in the store to buy a Head Start cannon that shot Grilly forward.

Grilly the Cheese is free of violence, and its graphics are straight out of a children's book. Young kids who can perform the basic gestures on an iPad or iPhone will enjoy this game. And more-experienced gamers looking for a quick fix will also likely enjoy it.—ROMAN LOYOLA

iPhone | ★★★½; Free; Piasa Games

Mega Dead Pixel

GAMES *Mega Dead Pixel* (go.macworld.com/megadead) is a runner—a type of game where the screen is constantly moving and you have to move your avatar. In this case, you're a pixel, you're falling, and you must avoid obstacles that look as if they were left behind by an Atari 2600 game console. You mostly score by "painting" an obstacle—that is, brushing past it by tapping on the left or right side of the screen to move your pixel out of the way.

But *Mega Dead Pixel* isn't just about avoidance. You can pick up coins to get power-ups, and run over white pixels to make your pixel bigger. With a bigger pixel, you can smash into obstacles to score, though each time you smash something, your pixel shrinks back to the one-pixel size and you must resume dodging obstacles. When you paint several obstacles in quick succession, you temporarily become a Mega Pixel and zoom downward, demolishing anything in your path.

Obstacles often appear in clusters, making it necessary to quickly move out of the way, and for this you need precision control and nimble fingers. The game presents a series of goals for you to achieve, which means your feeling of accomplishment is reflected in more than just a score. *Mega Dead Pixel* is free, but Chillingo offers several game enhancements as in-game purchases.

Mega Dead Pixel's premise is basic, but its gameplay is challenging. With its 8-bit–style graphics and retro soundtrack, *Mega Dead Pixel* offers a fun take on the runner game.—ROMAN LOYOLA

iPhone/iPad | ♦♦♦½; Free; Chillingo

Fieldrunners 2

GAMES Similar to most tower-defense games, *Fieldrunners 2* (go.macworld.com/fieldrunners2) gives you a straightforward mission. As waves of enemy troops attack, you must prevent them from reaching the other side of the screen. You do this by assembling gun towers in strategic combinations that funnel the bad guys into bottlenecks, where you can finish them off.

Version 2 expands the range of towers, and the graphics are exponentially better. You can spend points on useful items—a dose of Spanish flu, say. The game also rewards you with achievement-style cards for feats and milestones. *Fieldrunners 2* is as well-crafted and fun as the tower-defense genre gets.—DAVID PRICE

iPhone | ♦♦♦♦½; $3; Subatomic Studios

Dear Vi,

I think I'm finally fully unpacked and ready to start my first Real Job! Exciting! Ok, so let me tell you a bit about where I'm living right now. It's a studio apartment, provided by the Department. It's not too far from work. The place is [redacted] but charming, as they say. These [redacted] buildings have so much character! Bookshelves on every wall, lots of hidden closets and cupboards and built-ins. Very "efficient". That said, the truth is, I'll probably be spending most of my time in the office. I want to make a good first impression--teacher's pet and all that.

Blackbar for iPhone

GAMES *Blackbar* (go.macworld.com/blackbar) is an odd game—at once a politically literate tirade against censorship, an Orwellian adventure story told through half of a mangled email exchange, and a puzzle game based entirely around decoding blocks of text.

As a downtrodden citizen of a dimly sketched dystopia, you receive a series of messages with parts blacked out by censors and must work out what the missing words are. *Blackbar* is easy at first, but as the game progresses it weaves its tangled internal logic until your head hurts. The game can be frustrating—I was stumped for days trying to come up with a single word needed to unlock the next screen. And the actual substance of the puzzles is thin. But *Blackbar* makes up for this by having a wonderful story, whispered to you in code and which you reassemble piece by piece.

If you enjoy the idea of having your brain stimulated on a number of levels at the same time, this app is well worth $3.—DAVID PRICE

iPhone/iPad | ♦♦♦♦½; $3; Mrgan

Reviews

Accessories and Add-ons for Your iOS Devices

Hardware

Jawbone UP24

●●●½; $150; Jawbone; www.jawbone.com

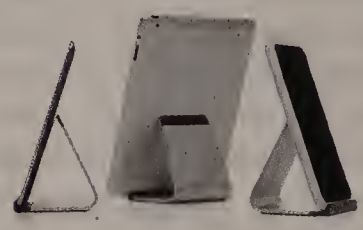
The virtue of the ultraspare UP24 fitness-tracking wrist band is that it looks good even when worn with a traditional wristwatch. But in functionality, it's playing catch-up with state-of-the-art trackers such as the Fitbit Force. The UP24 only now has Bluetooth syncing (for late-model iOS devices). Its activity and sleep tracking are standard fare. And without a digital display or a deeper data-tracking set, it can't be called cutting-edge.—JON PHILLIPS

FiftyThree Pencil

●●●½; $50; FiftyThree; www.fiftythree.com

Pencil is FiftyThree's first foray into the stylus market. The Bluetooth-enhanced aluminum pen integrates deeply with FiftyThree's Paper app to provide extra tools such as palm rejection and Blend mode. The pen has a rectangular rather than a round body, which makes gripping it after sketching awhile uncomfortable.

If Paper is your app of choice, the Pencil is an appealing accessory for drawing, writing, and sketching. Its software-based palm rejection is excellent, and the pen's construction and balance in the hand are top tier. But it doesn't quite measure up to other Bluetooth styluses in the field.—SERENITY CALDWELL



Bluelounge Mika

●●●½; $40; Bluelounge; www.bluelounge.com

If you want simple, Bluelounge's Mika is the way to go. This stand is just a curved piece of aluminum with black plastic strips wherever your iPad contacts the stand. This design means that any iPad—or any tablet or any smartphone, for that matter—can take advantage of this stand.

The Mika can prop up your devices in either landscape or portrait orientation, at an angle that's comfortable for reading or viewing (about 60 degrees from horizontal). The stand is secure enough for you to tap on the screen, but on-screen typing is awkward. If your iPad is in landscape orientation, all buttons and ports are accessible.

The Mika has no bells or whistles, and it doesn't fold down, so it's not really portable. But if you just want to prop up your iPad in your home or office, the Mika is an elegant option.—AMBER BOUMAN

Piexon AG SmartGuard

●●●; $35; Piexon; www.piexon.com

A practical option, the SmartGuard is a simple case with a quick-release canister of pepper spray attached to the side. You just pop the patented canister from the case to use it—though I wish the safety tab holding it in place felt more secure.

The case itself could be sturdier, too. The back has cutouts for ports, and the front is a thin frame that secures the phone to the back piece. More padding would protect the handset better.—AMBER BOUMAN

iOS Devices: Current Lineup

PRODUCT	SPECS	RATING	PRICE[1]	DISPLAY	MORE INFO
iPad Air[2]	16GB	Wi-Fi, ●●●●½	Wi-Fi: $499; Wi-Fi and cellular: $629	9.7-inch color (Retina)	go.macworld.com/ipadair
	32GB	Wi-Fi, ●●●●½	Wi-Fi: $599; Wi-Fi and cellular: $729	9.7-inch color (Retina)	go.macworld.com/ipadair
	64GB	Wi-Fi, ●●●●½	Wi-Fi: $699; Wi-Fi and cellular: $829	9.7-inch color (Retina)	go.macworld.com/ipadair
	128GB	Wi-Fi, ●●●●½	Wi-Fi: $799; Wi-Fi and cellular: $929	9.7-inch color (Retina)	go.macworld.com/ipadair
	16GB (iPad 2)	●●●●½	Wi-Fi: $399; Wi-Fi and cellular: $529	9.7-inch color	go.macworld.com/ipad2
iPad Mini	16GB	Wi-Fi, ●●●●	Wi-Fi: $329; Wi-Fi and cellular: $459	7.9-inch color	go.macworld.com/minirev
	32GB	Wi-Fi, ●●●●	Wi-Fi: $429; Wi-Fi and cellular: $559	7.9-inch color	go.macworld.com/minirev
	64GB	Wi-Fi, ●●●●	Wi-Fi: $529; Wi-Fi and cellular: $659	7.9-inch color	go.macworld.com/minirev
iPhone 4s, 5c, and 5s	8GB 4s[3]	●●●●	Free	3.5-inch color (Retina)	go.macworld.com/iphone4s
	16GB 5c[4]	●●●●	$99	4-inch color (Retina)	go.macworld.com/iphone5c
	32GB 5c[4]	●●●●	$199	4-inch color (Retina)	go.macworld.com/iphone5c
	16GB 5s[4]	●●●●½	$199	4-inch color (Retina)	go.macworld.com/iphone5s
	32GB 5s[4]	●●●●½	$299	4-inch color (Retina)	go.macworld.com/iphone5s
	64GB 5s[4]	●●●●½	$399	4-inch color (Retina)	go.macworld.com/iphone5s
iPod Touch 5th Generation	16GB	●●●●	$229	4-inch color (Retina)	go.macworld.com/touch516
	32GB	●●●●½	$299	4-inch color (Retina)	go.macworld.com/touch5
	64GB	●●●●½	$399	4-inch color (Retina)	go.macworld.com/touch5

[1]All prices are Apple's prices. [2]Separate Wi-Fi-and-cellular iPad models are available for AT&T's network and for Verizon's. [3]This phone is available only with an AT&T plan. [4]These models are available with an AT&T, Sprint, or Verizon plan.

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WHAT EVERYONE SHOULD KNOW ABOUT OS X MAVERICKS

TIPS, TABS, NOTIFICATIONS, AND MORE: HOW SAVVY ARE YOU ABOUT YOUR COMPUTER'S OPERATING SYSTEM?

When Apple releases a new version of OS X, we tend to stick with the way we did things in the old OS, ignoring fresh features in the new one. Eventually we try the new things, and gradually they become the old habits we stick with when the *next* new OS X comes out. Well, it's time to adopt the novel features in OS X Mavericks as your new normal. Mavericks has plenty to like, and it's not that hard to get up to speed. So strap on your learning cap, and master the unknown.

ILLUSTRATIONS BY HARRY CAMPBELL

MAC 101

THE BASICS: TABS, TAGS, AND NOTIFICATIONS

HERE'S HOW TO TAKE ADVANTAGE OF THREE NEW FEATURES IN OS X MAVERICKS. **BY CHRISTOPHER BREEN**

Now that we've been living with it for a few months, we're familiar with all of the new features in OS X Mavericks, right? No? You aren't using tags or tabs? You haven't even tried to use the new Maps app? Don't be embarrassed: Mavericks gives you a lot of new stuff to learn, and some of us have things other than "Explore Mavericks" at the top of our to-do list. But don't miss out on some of your new operating system's most useful and important new powers: Here are the basics about three such features.

FINDER TABS

You create tabbed windows all the time in Safari, and you can do the same in the Finder. Specifically, you can create a single window and then, within that window, create tabs—with each tab representing a different Finder folder. It's a great way to cut down on clutter.

In the Finder, press <Command>-N to create a new Finder window. Choose *View* → *Show Tab Bar*. Look at the top of your new Finder window, and you'll see a smallish plus (+) button on the far right. Click it, and you'll create a new tab that opens in the Finder's default view (which is the All My Files view). You can treat this tab just like a window. Open a folder within it, and that folder will show its contents. Click the window's *Back* button, and you'll jump to the previous contents of the tab.

You can create tabs in other ways, too. If you hold down the ⌘ key and double-click a folder, it becomes a new tab within the active window. Or you can drag a folder from another location (such as the desktop) on top of the plus sign to create a new tab that contains that folder's contents. If you'd like to pull a tab out of a window, just drag it outside the window; it will turn into a window of its own. (For more details, see "8 Tips for Working With Finder Tabs," on page 46.)

FINDER TAGS

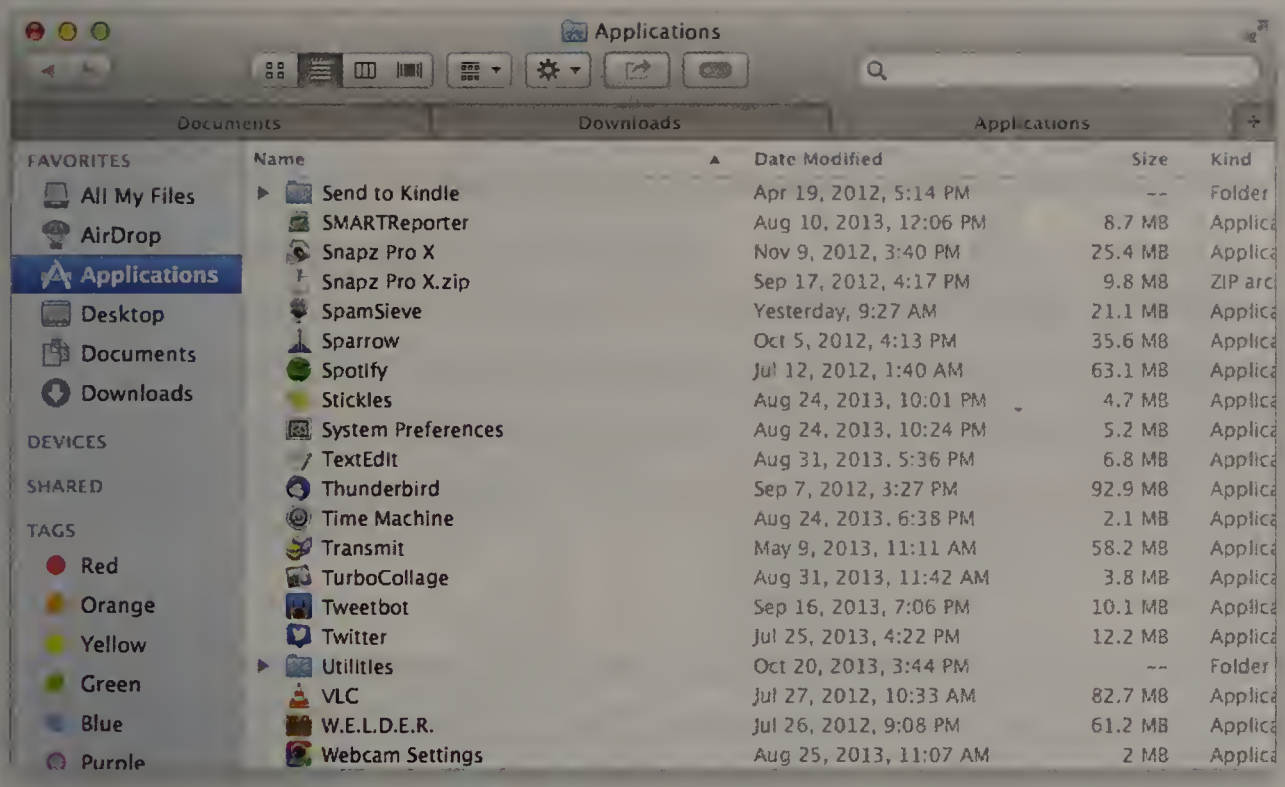
Do you alphabetize the spices in your condiments cabinet? Do you dutifully tag photos once they're imported into iPhoto? Do you know the difference between a cousin once removed and a second cousin? If that kind of specificity appeals to you, then you'll love Finder tags. This is a feature designed with organized minds in mind.

The point of Finder tags is to let you assign colored labels to your files and folders, and slap keywords on them. If this sounds like the old Labels and Finder Comments features, it should: They're kissing cousins (once removed, perhaps). But with Finder tags, you can assign more than one colored label to an item, and keywords are much more evident.

You can assign a colored tag in several ways. The easiest is to select an item in a window and, from the Tags menu at the top of that window, select a tag. (You can choose more than one if you like.) Alternatively, you can drag items on top of tags that appear in a Finder window's sidebar. Or you can select an item, click the Finder's File menu, and choose a tag. Or you can <Control>-click (right-click) a file or folder and choose a tag from the resulting menu. (For more information, see "13 Ways to Apply Tags," on page 48.)

Colored labels are all well and good, but keywords deliver the real power. And creating keywords is easy: Select an item in a window and click, once again, the Tags menu. At the top of this menu, you'll see an empty field. This is one place where you can create tags.

Want to assign a color to a new tag? Simply right- or <Control>-click on them in the sidebar, and choose a color



LESS CLUTTER Each tab in OS X Mavericks can represent a different finder folder—which means that you can populate your desktop with fewer open windows.

from the menu that appears. Another approach is to choose *Finder → Preferences*, click the *Tags* item, and then, in the resulting list of tags, click the empty circle next to the tag whose color you wish to change. At once a menu will appear, offering you the seven color choices along with a No Color option. (For more details, see "3 Ways to Edit Tags," on page 49.)

How worthwhile are these organizational tools? If you click one of these sidebar tags, you'll see a window full of files that have been assigned that tag. Click *Vacation plans*, for example, and all your vacation-related items should appear (assuming that you've taken the trouble to tag them).

Also, if you open a window in List view, choose *View → Show View Options*, enable the *Tags* option, and end by clicking the *Use as Defaults* button at the bottom of the window, you'll see the names of your tags within each Finder window whenever you open a window in List view.

YOU CAN CREATE A SINGLE WINDOW AND THEN, WITHIN THAT WINDOW, CREATE TABS—EACH REPRESENTING A DIFFERENT FINDER FOLDER.

NOTIFICATIONS

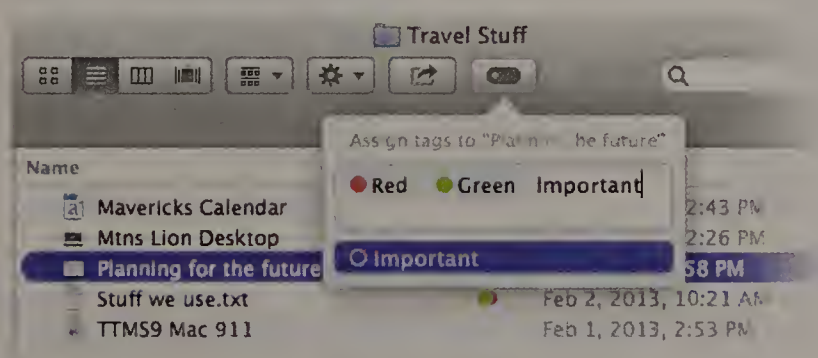
If you take a gander at the top-right corner of your Mac's menu bar—whether you're running Mountain Lion or Mavericks—you'll see three lines, preceded by dots. This is Notification Center, where alerts issued by your Mac appear. These can include Calendar events, received Twitter tweets, text messages, and email summaries.

Notification Center in Mavericks looks and operates very much as it did under Mountain Lion, but it has a few changes that you'll find helpful. To begin with, when you receive a notification from Apple's Messages application, you can click directly within the message and type a reply in the Reply field. You'll also see email notifications sent from Apple's Mail application. Hover your cursor over such a notification, and you'll have the option to reply to the message or to delete it. Choose *Reply*, and Mail will open with a reply message already set up for you. (For additional advice, consult "3 Other Things to Do With Notifications," on page 55.)

Safari now supports a feature that allows websites (with your permission) to send you notifications via Notification Center. This could be helpful with sites that push sports scores, for example.

If you scroll up in Notification Center, you'll find a new Do Not Disturb switch, similar to the feature of the same name on iOS devices. Flip the switch to *Off*, and you'll see no notifications until the next day, when the switch automatically moves back to On.

But you needn't handle this kind of thing with a switch. Instead, launch System Preferences and select the *Notifications* preference. On the right side of the resulting window, you'll see controls for configuring Do Not Disturb. By default, when you enable this option, your Mac won't bug you during the overnight hours between 10 p.m. and 7 a.m.; but you can always use the up and down arrow controls to change those hours. In addition, you can enable an option to permit reception of FaceTime calls during the Do Not Disturb hours that you have configured.



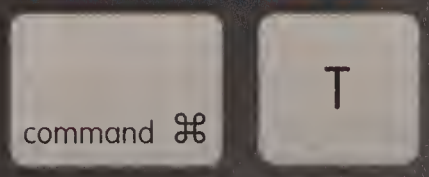
ADD YOUR OWN TAGS Mavericks makes it easy to introduce your own customized tags from the Finder toolbar, so you can organize your content more effectively.

MAC 201

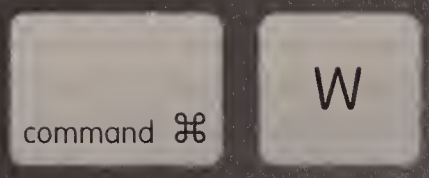
TIPS FOR WORKING WITH FINDER TABS

CREATE AND NAVIGATE THROUGH TABS IN THE FINDER LIKE AN EXPERT. BY DAN MILLER

TO OPEN A NEW TAB

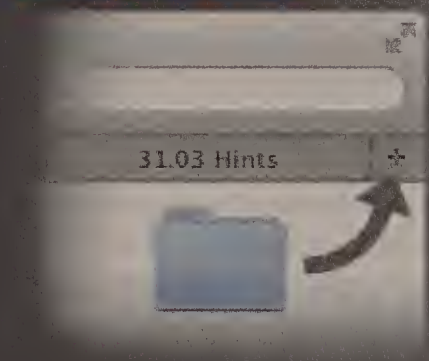


Press ⌘-T or hold down ⌘ while double-clicking on a folder.



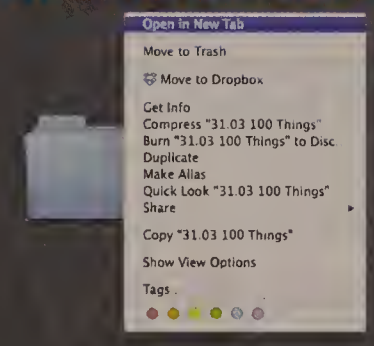
Press ⌘-W to close the tab.

...ANOTHER WAY



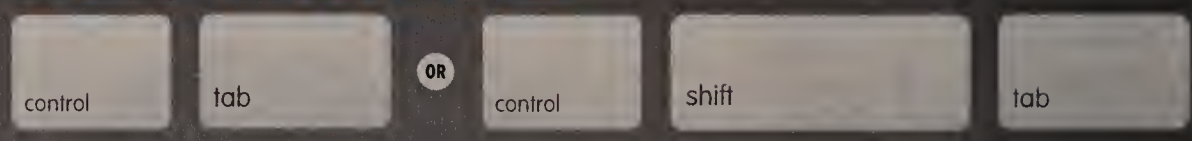
Drag a folder from within a tabbed Finder window up to the plus (+) sign in the upper-right corner.

...AND ANOTHER WAY



Right- or <Control>-click on a folder and select *Open* in a New Tab; alternatively, hold down the ⌘ key and double-click the folder.

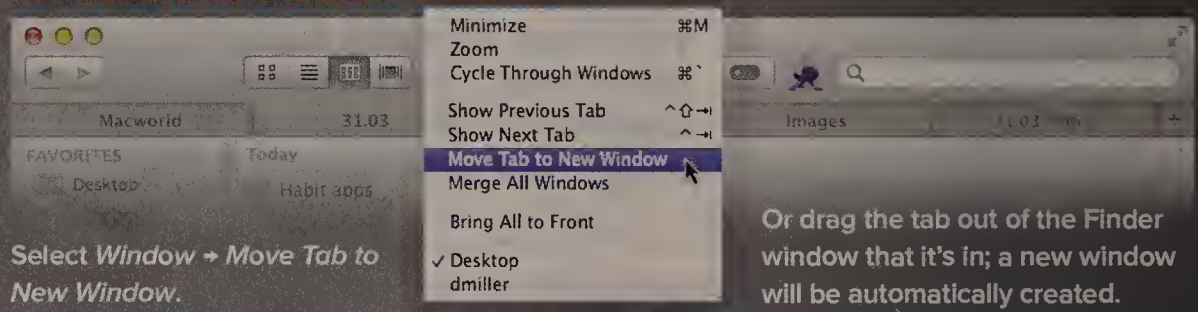
TO NAVIGATE FROM TAB TO TAB



Press <Control>-<Tab> to move left to right.

Press <Control>-<Shift>-<Tab> to move right to left.

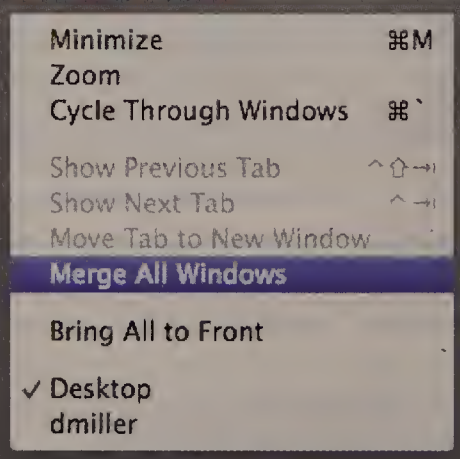
TO TURN A TAB INTO A WINDOW



Select *Window → Move Tab to New Window.*

Or drag the tab out of the Finder window that it's in; a new window will be automatically created.

TO GATHER A BUNCH OF OPEN WINDOWS INTO A SINGLE TABBED ONE



Select *View → Merge All Windows.*

TO MOVE A FILE FROM ONE TAB TO ANOTHER

Drag and drop it from the first tab up to the second.

TO REORDER TABS

Drag them from side to side.

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Julia Hernandez
Diagnosed at 16,
in remission.

Samuel L. Jackson
Stand Up To Cancer and
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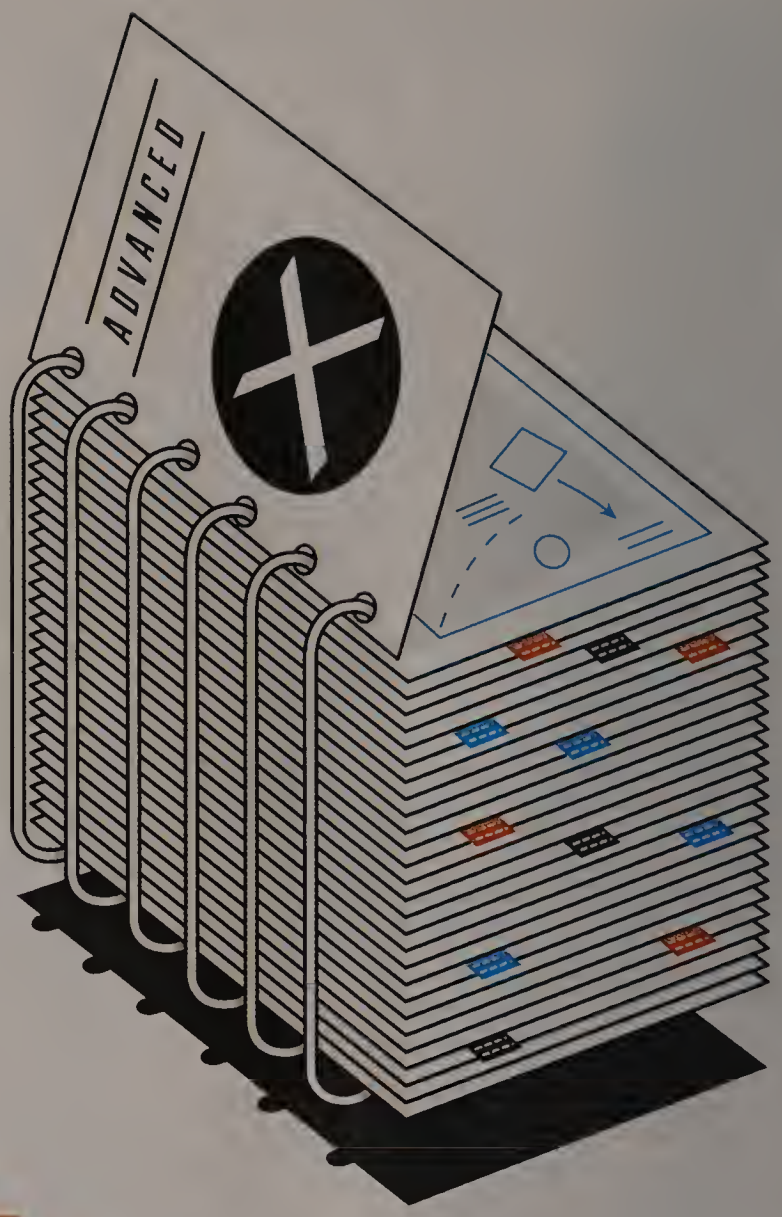
St. Baldrick's Foundation is a charitable 501(c)(3) organization funding childhood cancer research.
Stand Up To Cancer is a program of the Entertainment Industry Foundation, a 501(c)(3) charitable organization.

Photo by Nigel Parry



MAC 201

BEYOND THE BASICS: TAGGING

THERE ARE A MULTITUDE OF WAYS TO CREATE, VIEW, AND EDIT TAGS IN OS X MAVERICKS. **BY DAN MILLER**

The Finder has had a labels capability for years. In OS X Mavericks, those labels have become tags—and they've also grown more powerful and capable. Here's a more-advanced examination of the intricacies of applying and editing tags, as well as a look at how to view files that have already been tagged.

13 WAYS TO APPLY TAGS

<Control>- or right-click a file: An all-purpose approach is to <Control>-click or right-click a file, and then select a tag from the pop-up contextual menu.

Drag the file: Drag the file from your Finder window's main pane into the sidebar's tags section, and from there onto the tag you want to apply.

In the toolbar: Select a file or files, and then click on the Tags icon in the Finder toolbar. That will open a tags window, from which you can assign an existing tag or create and apply a new one. As you type, Mavericks will suggest existing tags that match what you've typed; you can select one of those suggestions with the arrow keys or click on it with the mouse, then press *Return*.

Get Info: Select a file or folder, and then choose *File* ➝ *Get Info* (or press ⌘-I). In the resulting Info window, click in the *Add Tags* field at the top and begin adding new or existing tags.

When you save: When you save a file, use the Tags field that appears in OS X Mavericks's Save (or Save As) dialog boxes. A tags option appears in iCloud save dialog boxes, too.

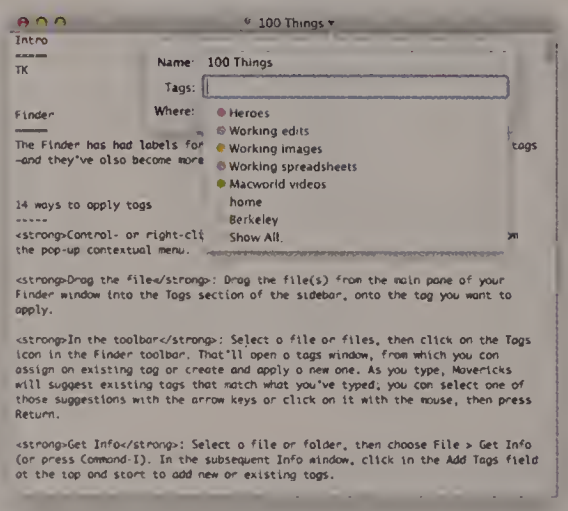
From the File menu: Select one or more files in the Finder, choose *File* ➝ *Tags*, and then apply the tag in the window that appears.

From the window title bar: In some apps (including TextEdit and the iWork programs), you can click a down arrow next to the file's name at the top of the document window; doing so causes the OS to reveal a drop-down menu that includes a tags section. You can edit the document's tags from that section.

Create a new tag: After you've selected a file (or files) to be tagged, click *Tags...* in the Finder sidebar and then type the name of the new tag in the tag box. When you're done, click *Create new tag command* below that text box. To give that new tag a color, right-click it in the sidebar, and then click the color that you want to assign to it.

Use smart folders: In the Finder, choose *File* ➝ *New Smart Folder*. In the resulting window, click the plus (+) button next to the Save button near the top of the window. Enter your first condition. (For

MAVERICKS WILL SUGGEST EXISTING TAGS THAT MATCH WHAT YOU'VE TYPED; YOU CAN SELECT THOSE SUGGESTIONS WITH ARROW KEYS.



TITLE DROP-DOWN
One of the options for applying tags to a document is to use the drop-down list accessible from the window title bar.

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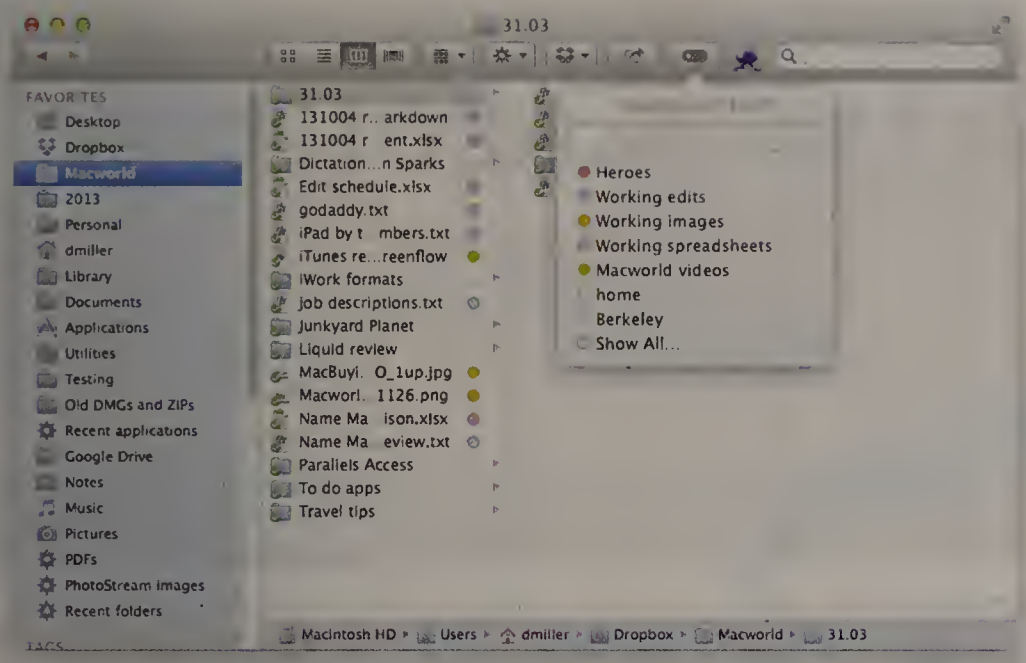


TAG TOOL The Finder's toolbar in OS X Mavericks has a window for creating new tags and for assigning existing tags to appropriate files.

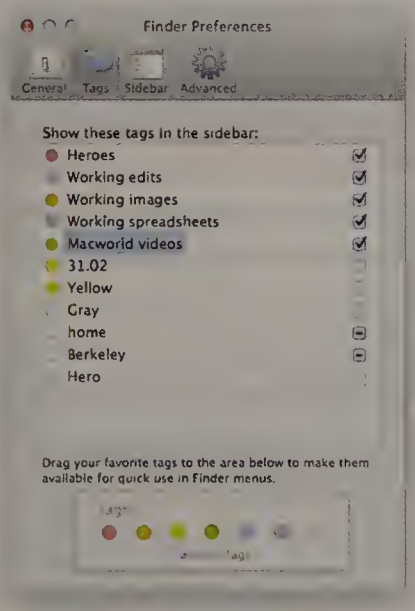
example, specify a file type, documents that contain certain words, files created on a specific day or within a period of time, or files you've placed in a particular location.) Enter any other conditions you want. When you're done, press ⌘-A to select all of the files that meet your conditions; then use one of the techniques above to apply the tag.

Create a keyboard shortcut: Launch System Preferences, choose the Keyboard preference pane, click the Shortcuts tab, and then the App Shortcuts entry; next, click the plus-sign (+) button near the bottom of the window. In the next sheet, choose Finder from the Application pop-up menu, and enter **Tags...** in the Menu Title field. You can use either three periods or a real ellipsis after the word **Tags**; to get the latter, just press <Option>-; (the semicolon key). Enter a keyboard shortcut in the field of the same name—something like <Shift>-<Control>-T—and click *Add*. When you select an item in the Finder and press your shortcut, the Tags window will appear.

Use an iCloud shortcut: In an application that supports iCloud (such as Apple's TextEdit), click the small triangle that appears next to the name of the document in the window's title bar. Then add a tag in the Tags field from the window that appears.

Use a third-party app: In Hazel, for instance, you could set up a rule that looks in a folder you want to monitor, and set the conditions (*Kind is text*, say). Once you've set the conditions, apply the tab by using Hazel's *Add Tags* action. (You can replace old tags with new ones if you like.)

Use tags on applications: Select an application that you obtained from the Mac App Store and press ⌘-I. Click the Lock icon at the bottom of the Info window, and enter your administrator name and password to unlock the application. Next, click the *Read only* entry that appears next to the 'everyone' permissions group and change it to *Read & Write*. After you close the Info window, you will be able to tag the app.



FINDER PREFERENCES You can edit and enable tags in the Finder's preferences window.

3 WAYS TO EDIT TAGS

Finder → Preferences: In the Tags pane, click a tag to rename it; right- or <Control>-click it to change its color.

Finder sidebar (a): Right- or <Control>-click a tag in the sidebar, and then either select *Rename* or assign the tag a new color.

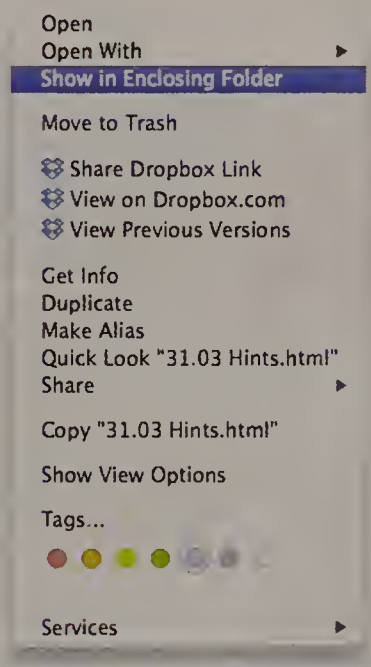
Finder sidebar (b): Select *All Tags...* in the sidebar, and then right- or <Control>-click a given tag to rename it, delete it, or change its color.

4 WAYS TO VIEW TAGGED FILES

In the sidebar: In either the Finder dialog box or the Open dialog box, click the tag in the sidebar to see all files that bear it. (Make sure that you've selected *Recent Tags* as a sidebar option in *Finder → Preferences → Sidebar*.) If you select a tag, you can run a Spotlight search in that same Finder window; the search will find only matching items that have that tag.

In searches (a): Press <Option>-⌘-<Spacebar> to initiate a Spotlight search, and then type the name of the tag you're looking for. Use the arrow keys to select the appropriate tag from the Tags section of the search-results look-ahead drop-down list, and then press <Return>.

In searches (b): To be more specific, initiate the search, and then type **tag:** followed by the name (or initial letters) of the tag you want.



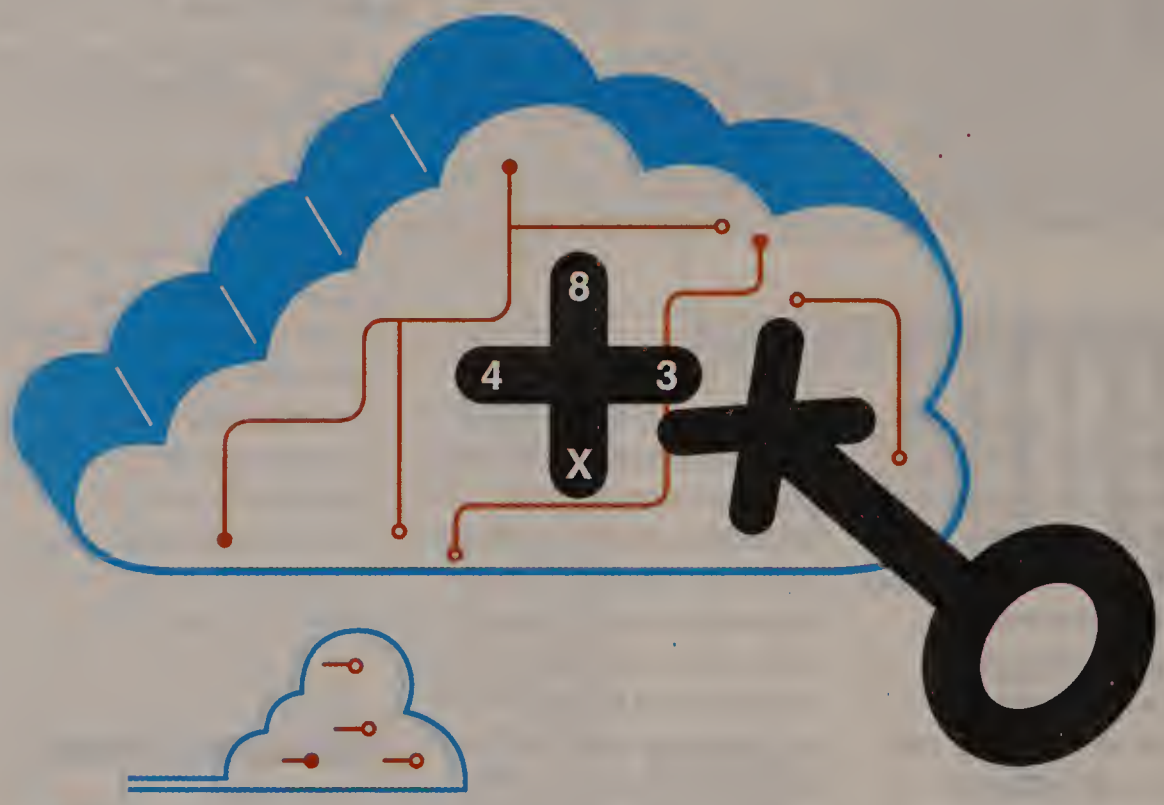
SHOW IN ENCLOSING FOLDER When viewing a tagged file, you can show it in its original location.

In the original location: You can view tagged files in their original locations in two simple steps. First select the file, and then choose *File → Show in Enclosing Folder*. Alternatively, you can right- or <Control>-click the file and select that option from the contextual menu.

MAC 201

BEYOND THE BASICS: SECURITY

THE NEW ICLOUD KEYCHAIN CAN HELP YOU MANAGE PERSONAL INFO SAFELY. **BY JOE KISSELL**



Assuming that you aren't already wedded to a third-party password-manager such as 1Password, the new iCloud Keychain can be a huge help: Like those third-party tools, it securely stores confidential information that you need to enter all the time—such as passwords and credit-card numbers—and makes that info available from any device that syncs to your iCloud account. Give it a try!

7 STEPS TO USING iCLOUD KEYCHAIN

Turn it on: Open the *iCloud* pane of System Preferences. Put a check in the *Keychain* checkbox, enter your Apple ID password, and click *OK*.

Create an iCloud security code: You'll next be prompted to create and confirm an iCloud Security Code. By default the code is four digits long; to use more digits, click *Advanced*. You'll also be asked to enter a mobile phone number where you can receive SMS messages to confirm this code. iCloud will warn you if your code is too easy to guess. (To change your code later on, go to the iCloud preference pane and click *Account Details*.)

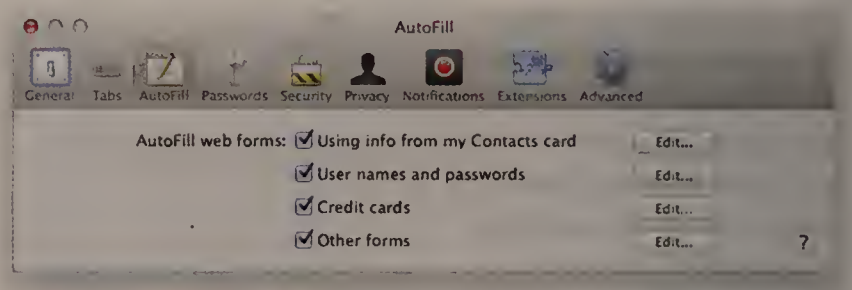
Approve other devices: Once your Mac is set up, move on to your iPhone and other devices. Enabling iCloud Keychain works the same way, except that after you enter your Apple ID password, you'll be prompted to choose a method to approve access: either the iCloud security code you set up or 'Approve from Other Device'. (Choosing the latter option means that a notification will appear on all of your other devices that have iCloud Keychain enabled with the same account. On a Mac, open the *iCloud* pane of System Preferences, click the *Details* button located next to Keychain, enter your password, and click *Allow*; on an iOS device, enter your Apple ID password when prompted to do so, and then tap *Allow*.)

Enable Safari: Choose *Safari* → *Preferences*, click *AutoFill*, and make sure that all desired categories are selected. When you visit a site in Safari for which you've previously stored a username and password, the fields should auto-fill.

Generate new passwords: To generate a new, random password for a site on which you're setting up an account, first make sure the Password field is blank and then click or tap in it. Safari will suggest a password; click or tap it to fill in that password and save it in iCloud Keychain.

Store credit card numbers: When you enter a number the first time, Safari prompts you to save it. Later, when you see a blank Credit Card Number field in Safari, click or tap in that field to display a list of credit card numbers you've stored in iCloud Keychain; then select the one you want. You'll still have to type in your card's verification code.

View or remove saved passwords: First choose *Safari* → *Preferences*, and then simply click *Passwords*.



SAFARI PREFERENCES You can use Safari's own preferences window to manage the kinds of data stored in iCloud, including arranging for Safari to autofill specific Web forms with previously stored information. .

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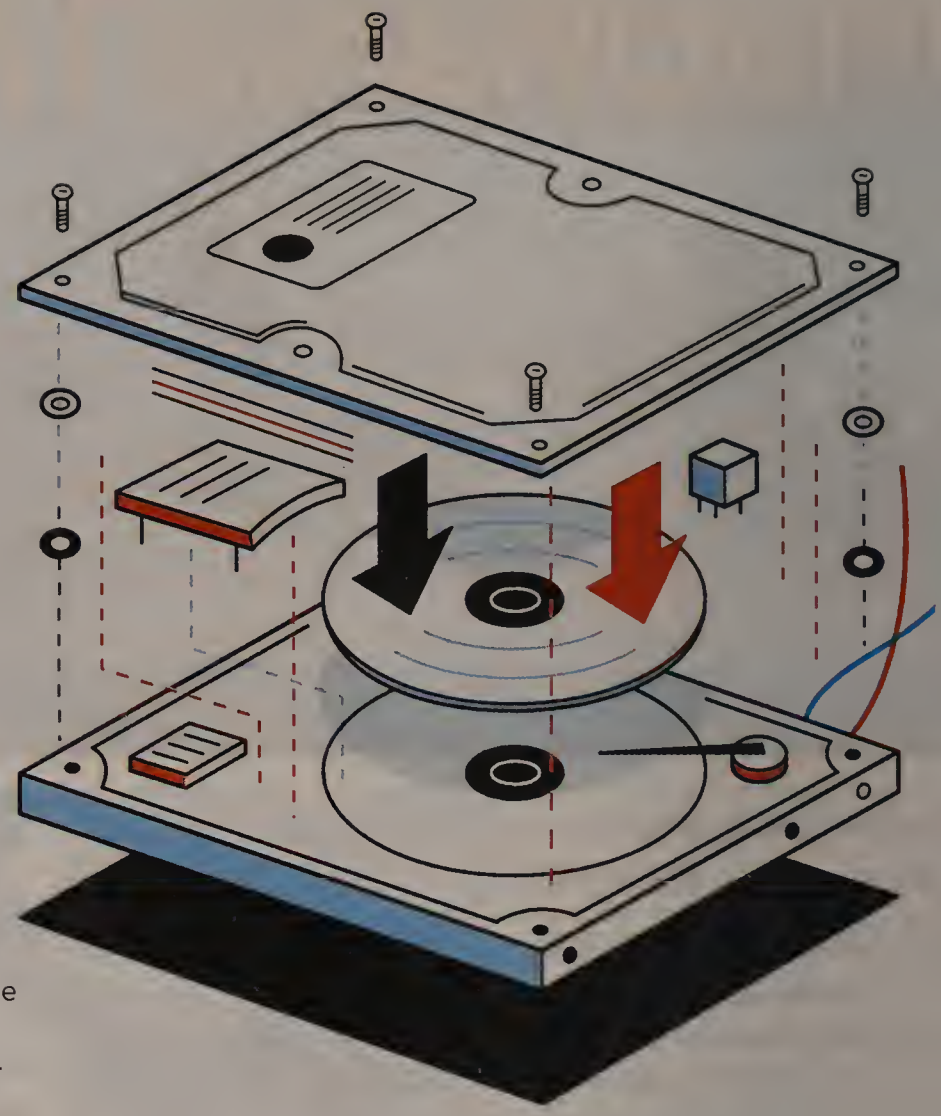
MAC 201

BEYOND THE BASICS: BOOTABLE RECOVERY DRIVE



WHEN YOUR SYSTEM FAILS, AN OS X RECOVERY DRIVE CAN BE A LIFESAVER. HERE'S HOW TO MAKE ONE. **BY DAN FRAKES**

Mavericks is available only as a download from the Mac App Store, and the downloadable installer doesn't require a bootable installation disc. But if you want a bootable Mavericks installer, you can create one fairly easily.

GET THE LATEST MAVERICKS VERSION

Look at the date next to Updated (or Released) in the Info box on the Mavericks page of the Mac App Store. Then locate your downloaded copy of the Mavericks installer. In the Finder, choose *File* → *Get Info*, and look at the date next to Modified. If the Mac App Store date is newer than the Modified date on your copy of the installer, redownload the installer to get the latest version.

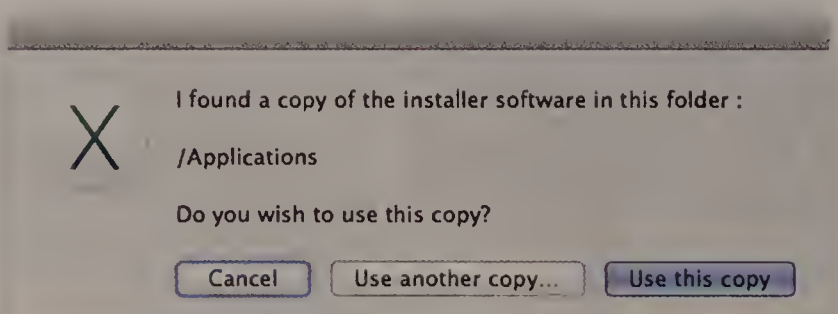
To get it, you must first delete your current copy of the installer and then redownload the Mavericks installer from the Mac App Store. If the Mac App Store won't let you redownload the installer, quit the Mac App Store app, relaunch it, and <Option>-click the Purchases tab in the toolbar; the Download button should appear next to Mavericks in the Purchases list.

You can create a bootable OS X install drive in any of three ways: by using a new feature (called createinstallmedia) built into the Mavericks installer itself; by using Disk Utility; or by using the third-party utility DiskMaker X.

The first method's only downside is that it doesn't work in Snow Leopard. I had trouble with DiskMaker X in my Mavericks testing, so I won't explain the third method here.

Whichever method you use, you'll need a Mac-formatted drive (a hard drive, a solid-state drive, a thumb drive, or a USB stick) that can accommodate the installer and its data; I recommend using at least an 8GB flash drive, but anything larger than roughly 5.5GB should work. The drive you use must also be formatted with a GUID Partition Table.

Download the Mavericks installer from the Mac App Store, and confirm that it's in your main Applications folder. (The Terminal command I use here assumes that the installer is in its default location.)



FIND THE INSTALLER Before you can begin creating a recovery drive for OS X Mavericks, you must first download the Mavericks installer from the Mac App Store to get the latest version of the operating system.

CREATE THE INSTALL DRIVE: METHOD 1

Connect a properly formatted 8GB (or larger) drive to your Mac. Rename it **`Untitled`**. (The command assumes the drive is named Untitled.)

At the Terminal command line, type—in a single line—all of the text displayed in the Command Text box at the top of page 53. Press <Return>.

Note: This step erases the destination drive or partition, so make sure it doesn't contain any valuable data.

When prompted to do so, type in your admin-level account password.

The Terminal window will report the progress of the process as Erasing Disk: 0%... 10%... 20%... and so on. Wait until you see the words 'Copy Complete'; the process could take 30 minutes, depending on how fast your Mac copies data to your destination drive.

You now have a bootable Mavericks install drive.

Command Text

```
sudo /Applications/Install\ OS\ X\
Mavericks.app/Contents/Resources/createinstallmedia
--volume /Volumes/Untitled --applicationpath
/Applications/Install\ OS\ X\ Mavericks.app --nointeraction
```

CREATE THE INSTALL DRIVE: METHOD 2

Find Disk Utility, the app built into OS X, in /Applications/Utilities. (Disk Utility may not be able to create a Recovery HD partition if the Mac's drive doesn't already have one.)

Once you've downloaded Mavericks, find the 'Install OS X Mavericks.app' installer on your Mac. It should have downloaded to your main Applications folder (/Applications).

Right-click (or <Control>-click) the installer, and choose *Show Package Contents* from the resulting contextual menu.

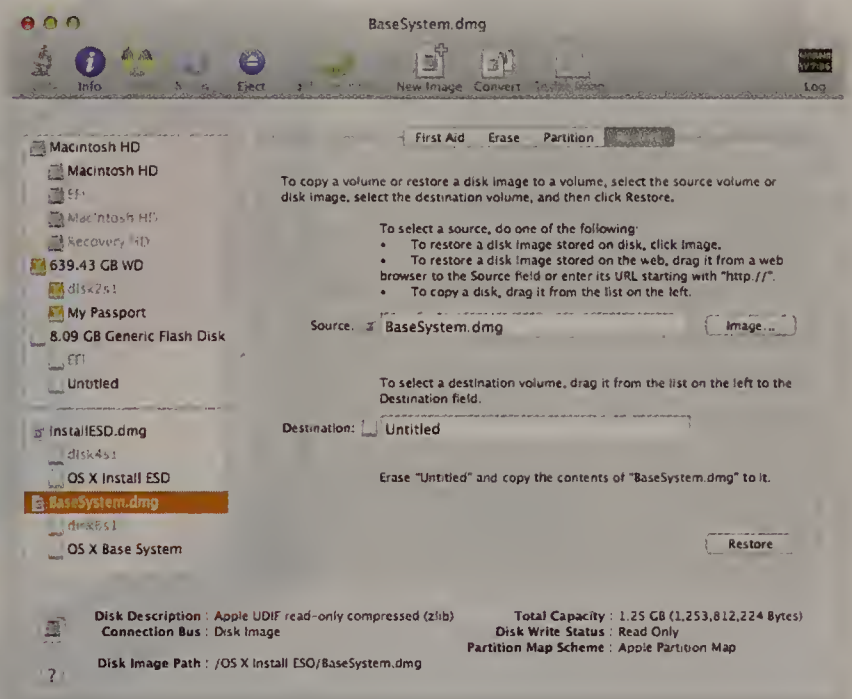
In the resulting folder, open *Contents* and then *Shared Support*; you'll see a disk image file called InstallESD.dmg. In the Finder, double-click *InstallESD.dmg* to mount its volume; it will appear in the Finder as 'OS X Install ESD'.

The file you want to get to is BaseSystem.dmg, a disk image inside OS X Install ESD. BaseSystem.dmg is invisible, however; and because this is a read-only volume, you can't make BaseSystem.dmg visible. So instead, you'll mount it using Terminal, which makes it visible in Disk Utility. Open Terminal, type **`open /Volumes/OS\ X\ Install\ ESD/BaseSystem.dmg`**, and press <Return>.

In /Applications/Utilities, launch Disk Utility. In the volumes list on the left, you'll see InstallESD.dmg (with its mounted OS X Install ESD volume below it) and BaseSystem.dmg (with its mounted OS X Base System volume below it). Select *BaseSystem.dmg* (not 'OS X Base System') in Disk Utility's sidebar, and click the Restore button in the main part of the window. Drag the BaseSystem.dmg icon into the Source field on the right (if it isn't already there).

Connect to your Mac the properly formatted hard drive or flash drive that you want to use for your bootable Mavericks installer. In Disk Utility, find this destination drive in the left sidebar. You may see a couple of partitions under the drive—one named EFI, and another with the name listed for the drive in the Finder. Drag the one with the drive name into the right-hand Destination field. (If the destination drive has several partitions, just drag the partition you want to use as your bootable installer volume.) Again, this step will erase the destination drive or partition, so make sure that it contains no valuable data.

Click *Restore*, and then click *Erase* in the dialog box that appears. If prompted to do so, enter an admin-level username and password. Wait a few minutes for the restore procedure to finish.

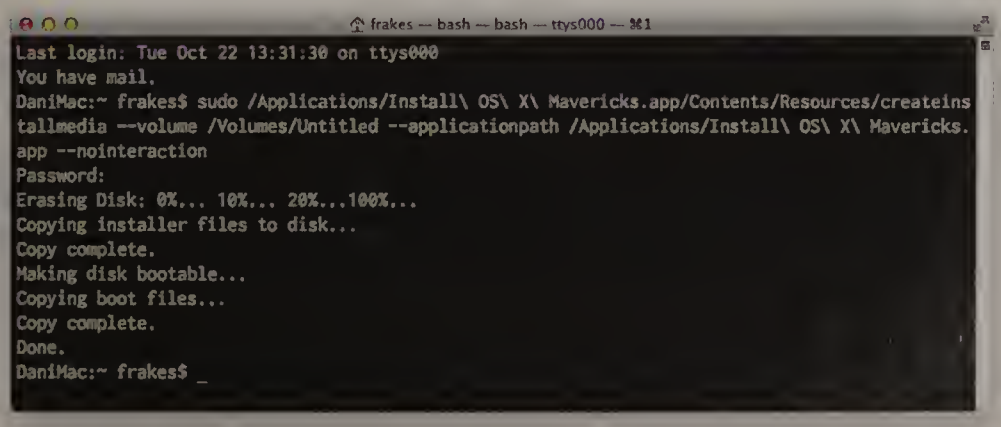


DISK UTILITY The second method for creating a recovery drive involves working with OS X's built-in Disk Utility app.

Select *BaseSystem.dmg* (not 'OS X Base System') on the left in Disk Utility, and click that drive, and then open the Installation folder. Delete an alias called *Packages* there.

Open the mounted OS X Install ESD volume. You'll see only a folder called Packages. Drag the folder into the Installation folder on your destination drive. Copying this 4.8GB (or so) folder takes some time, especially if you're copying to a slow thumb drive. Then eject the OS X Install ESD volume.

If you'd like to, give your bootable installer drive from OS X Base System a more descriptive new name, such as 'OS X Mavericks Installer'.



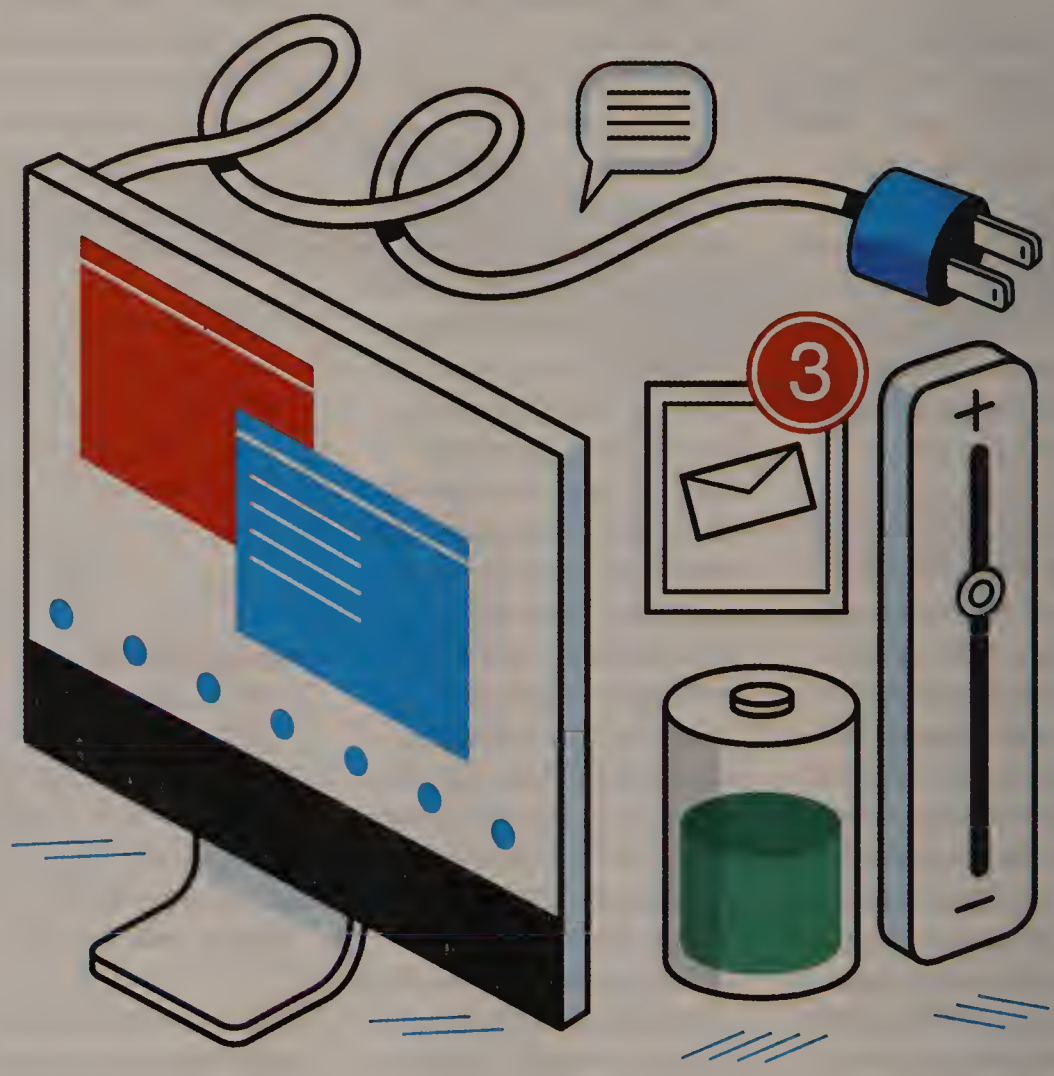
TERMINAL LINE At the Terminal command line, you'll have to type a very long character string (with some letter spaces thrown in) to create your recovery drive.

MAC 201

BEYOND THE BASICS: DISPLAYS, POWER, AND NOTIFICATIONS

THE NEW FEATURES IN OS X MAVERICKS AREN'T LIMITED TO TABS AND TAGS. **BY DAN MILLER**

To this point in our coverage, we've focused on ways to speed up your computer workflow and keep your system accessible and uncluttered. But there are many other new features in OS X Mavericks that extend beyond tags, tabs, and iCloud Keychain. In this section we present tips that should help you take advantage of some of those newly introduced tools, including the operating system's refined support for multiple displays, for power-management tools, and for more-useful notifications.



3 TRICKS FOR MANAGING MULTIPLE DISPLAYS

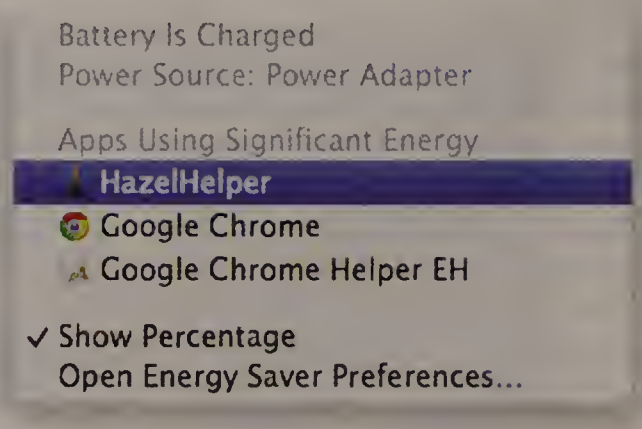
See the Dock on nonprimary monitors: Usually, the Dock appears only on the primary monitor (by default, that's the external display). But sometimes that's not as convenient a place to view it as the other monitor would be.

To see the Dock on your other display, simply move the cursor on the second display's screen to whichever edge the Dock normally appears on (either the bottom or one of the two sides). At once, the Dock will appear there.

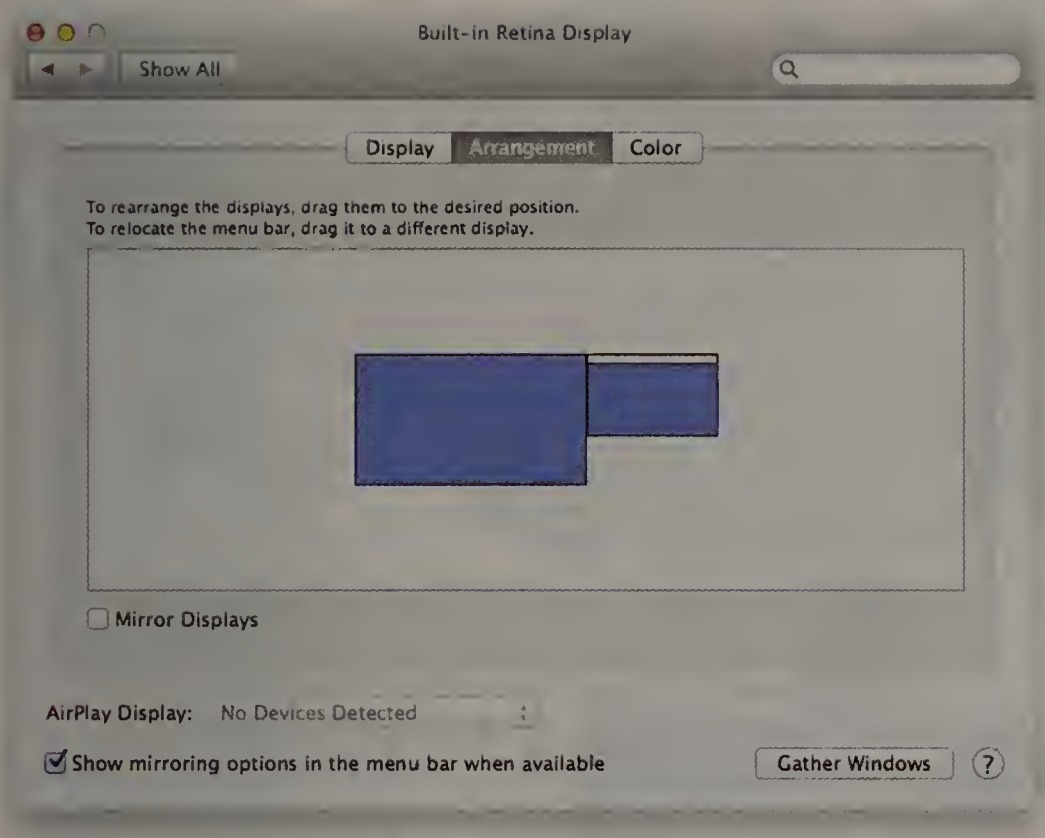
Note that, if you use the task switcher shortcut command (⌘-<Tab>), the Dock will appear on whichever monitor it was most recently active on. If you later decide that you want it to appear on your main display again, you'll have to open the Dock there first.

Choose the display that gets the menu bar: To make this choice, go to *System Preferences* → *Displays* and open the *Arrangement* tab. Then drag the little menu bar from one display to another.

Enable multiple workspaces: Arranging to have more than one workspace is easy. Go to *System Preferences* → *Mission Control*, and check the box next to *Displays Have Separate Spaces*. That



POWER HOGS The battery icon in the menu bar can tell you which specific apps are mainly responsible for sucking your battery dry.



HIDE MENU BAR In the Displays preference pane, you can specify in which screen the menu bar should appear—and on which edge.

option allows each of your monitors to have its own set of separate workspaces.

4 WAYS TO CONSERVE SYSTEM POWER

See which apps are consuming the most power, method 1: Click the battery icon in the menu bar, and then examine the entries that you see listed in the section headed 'Apps Using Significant Energy'.

See which apps are consuming the most power, method 2: In Activity Monitor, open the *Energy* tab. There, you have the choice of sorting currently active processes either by their current energy impact or by their average energy impact over time.

Keep App Nap enabled: OS X Mavericks includes an under-the-hood technology called App Nap that automatically powers down energy-consuming processes when those processes aren't in the front-most window—or in other words, when you aren't paying attention to them.

If you want to save as much battery power as you possibly can, don't disable App Nap. (But when you want to, select an app that supports it, press ⌘-I to open its Get Info window, and then check the *Prevent App Nap* box.)

Turn off power-hungry plug-ins: In Safari, you can save power by not automatically running things like Flash animations. To arrange this, go to *Safari* → *Preferences*, select the *Advanced* tab, and in the Internet Plug-ins section uncheck the box next to *Stop Plug-ins to Save Power.*

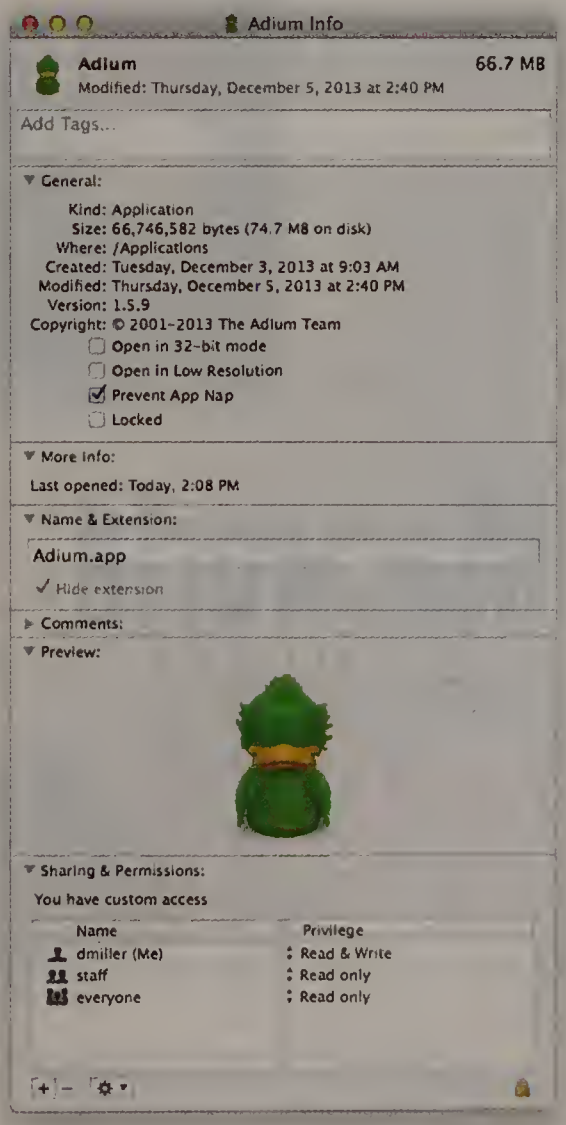
APP NAP AUTOMATICALLY POWERS DOWN ENERGY-CONSUMING PROCESSES WHEN YOU AREN'T PAYING ATTENTION TO THEM.

3 OTHER THINGS TO DO WITH NOTIFICATIONS

Reply to messages: Want to do more with notifications than close or snooze? Go to *System Preferences* → *Notifications*, find the Share Buttons entry there, and check the box next to *Show Share Buttons in Notification Center.* That done, you can reply to incoming iMessages in the Messages app directly from notifications.

Skip songs in iTunes: When you're playing music in iTunes, you can configure it so that a notification appears each time a new song begins. If you hold the cursor over that notification, you should see a Skip button, which you can click to skip to the next track.

Postpone software updates: When you receive a notification that software updates are available, you can postpone installation of those updates for an hour, until later that night, or until the next day. To do so, simply click and hold down the Update button.



BLOCK APP NAP Don't want an app to power down automatically when it's in the background? Open its Get Info window and prevent App Nap from kicking in.

Macworld / iWorld

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MAC BUYING GUIDE

HOW TO PICK THE RIGHT COMPUTER

BY ROMAN LOYOLA
PHOTOGRAPHY BY ROBERT CARDIN

Since you're reading this article, you're probably thinking about buying a new Mac, and you may be in need of a little guidance. Fortunately, we've tested (almost) every standard-configuration Mac model currently in Apple's lineup.

This buying guide provides an overview of all the Mac models available, and explains what each one is best suited for.

MACBOOK PRO WITH RETINA DISPLAY

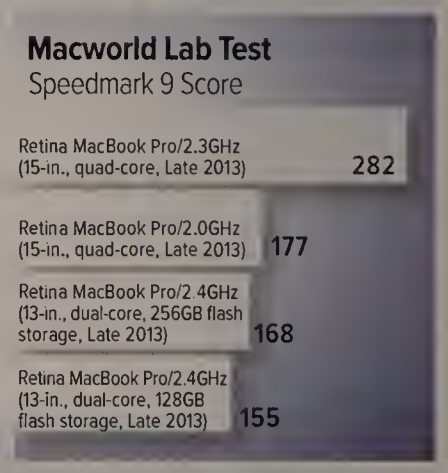
WHAT IS IT? The Retina MacBook Pro has a high-density display—images and text look especially smooth and clean on it. Apple updated this model in October.

WHO IS IT FOR? The demanding user who wants a portable computer that performs well (see chart at right)—it's the fastest Apple laptop in our tests.

WHAT ARE THE SPECIFICATIONS? The Retina MacBook Pro is available in screen sizes of 13 inches (go.macworld.com/retinambp13) and 15 inches (go.macworld.com/retinambp15).

Apple sells the 13-incher in three versions. The $1299 model has a 2.4GHz dual-core Core i5 processor, 4GB of memory, and 128GB of flash storage. The $1499 model has a 2.4GHz dual-core Core i5 processor, 8GB of memory, and 256GB of flash storage. The $1799 model has a 2.6GHz dual-core Core i5 processor, 8GB of memory, and 512GB of flash storage. All three have an Intel Iris Graphics integrated graphics processor.

Apple has two 15-inch Retina MacBook Pros. The $1999 model has a 2.0GHz quad-core Core i7 processor, 8GB of memory, 256GB of flash storage, and Intel Iris Pro integrated graphics. The $2599 model offers a 2.3GHz quad-core Core i7 processor, 16GB of memory, 512GB of flash storage, Intel Iris Pro integrated graphics, and a discrete 2GB Nvidia GeForce GT 750M graphics processor.



All results are scores. Higher scores are better. Stock configurations were tested, except as noted. Macworld Lab testing by James Galbraith and Albert Filice

MACWORLD'S BUYING ADVICE: If you need power and mobility, the Retina MacBook Pro is the ticket.

MACBOOK PRO

The standard MacBook Pro continues to offer ports that Apple has phased out of its other laptops.

WHAT IS IT? The MacBook Pro (go.macworld.com/macbookpro) has a standard, non-Retina display.

WHO IS IT FOR? The user who wants a portable computer that doesn't sacrifice a lot.

WHAT ARE THE SPECIFICATIONS? The update to the MacBook Pro line in October reduced the non-Retina models to one laptop.

That laptop is a 13-inch model with a 2.5GHz dual-core Core i5 processor, 4GB of memory, a 500GB, 5400-rpm hard drive, and an integrated Intel HD Graphics 4000 graphics subsystem. You can customize your order with a faster processor, more memory, a larger hard drive, or a solid-state drive.

The standard MacBook Pro is the only Mac laptop with a built-in SuperDrive (for optical discs).

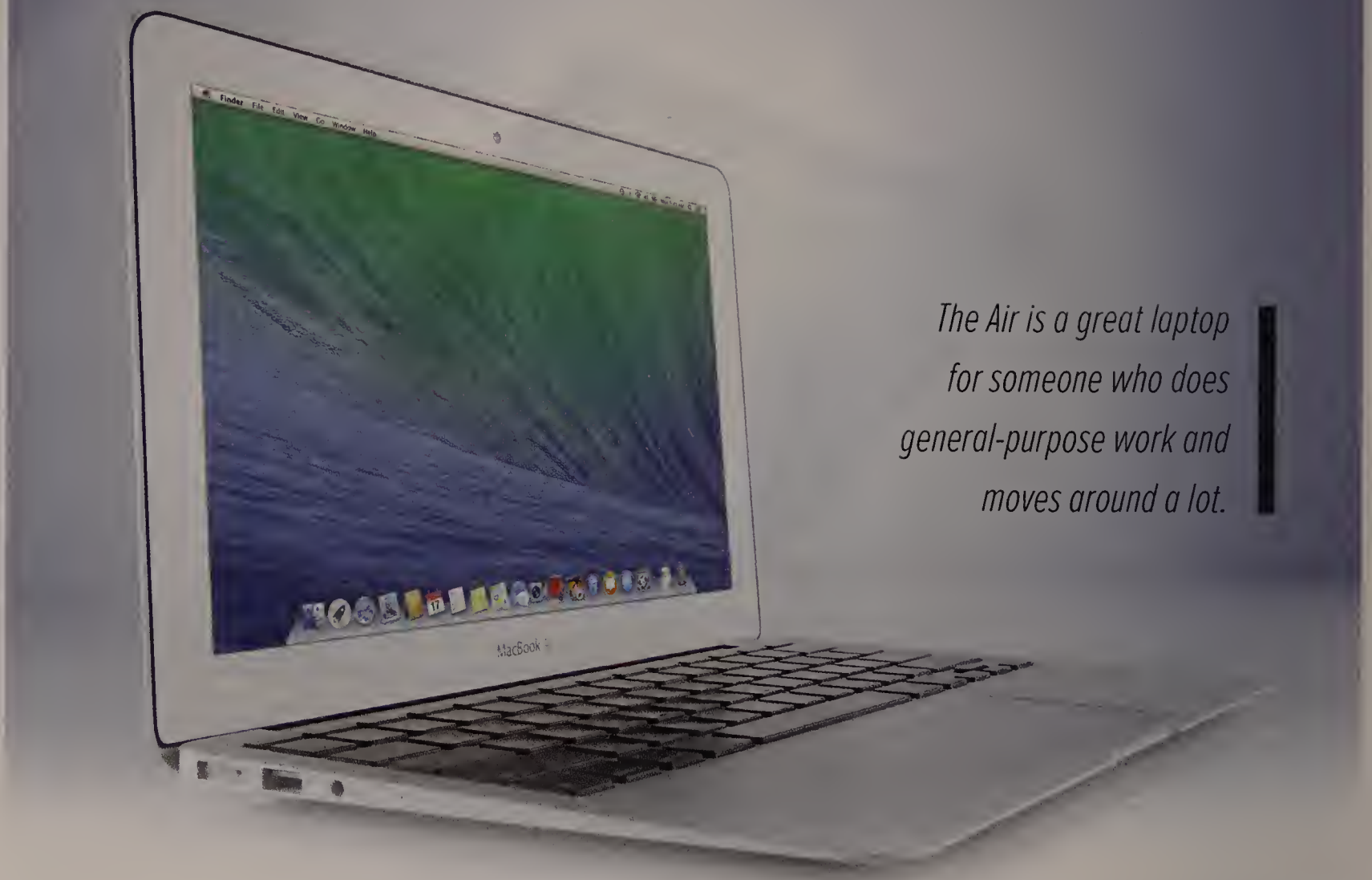
It comes with built-in Wi-Fi and Bluetooth. But it continues to offer ports that Apple has phased out of its MacBook Air and Retina MacBook Pro lines, such as a FireWire 800 port and a gigabit ethernet port. This model has two USB 3.0 ports.

The 13-inch standard MacBook Pro is slower overall than the 13-inch MacBook Air—the MacBook Pro's hard drive can't keep up with the MacBook Air's flash storage. However, the MacBook Pro has a tremendous performance advantage over the MacBook Air on tasks (such as video editing) that are processor-intensive and on tasks that don't involve reading or writing much to a storage device.

Note: A standard MacBook Pro was not available for formal testing at press time.

MACWORLD'S BUYING ADVICE: The hard drives create a performance bottleneck, so if you want to get the best performance, consider replacing the hard drive with an extra-cost SSD. If you want a laptop for travel and can't decide between a standard MacBook Pro and a MacBook Air, go with the MacBook Air unless you really need built-in FireWire; you might also consider a Retina MacBook Pro.

MACBOOK AIR



The Air is a great laptop for someone who does general-purpose work and moves around a lot.

WHAT IS IT? The MacBook Air (go.macworld.com/mbookair) is an ultrathin, ultralight laptop with two screen sizes: 11 inches (2.4 pounds) and 13 inches (3.0 pounds).

WHO IS IT FOR? Anyone who is always on the go, who doesn't want a regular-size laptop, and who needs a computer that's more versatile than an iPad.

WHAT ARE THE SPECIFICATIONS? All four MacBook Air models have the same 1.3GHz dual-core Core i5 processor and come with 4GB of RAM and integrated Intel HD Graphics 5000 technology. Apple claims a battery life of 9 hours for the 11-inch versions, and 12 hours for the 13-inchers.

The versions differ mainly in storage. The 11-inch model ($999) and the 13-inch model ($1099) have 128GB of flash storage, whereas the 11-inch model ($1199) and the 13-inch model ($1299) have a more generous 256GB.

The MacBook Air has Wi-Fi for connecting to a network and Bluetooth for wirelessly connecting a peripheral. Connecting to an ethernet network requires an Apple USB Ethernet Adapter.

Thunderbolt is the Air's high-speed connector. The laptop also has two USB 3.0 ports, which can work with USB 2.0 devices. To accommodate a FireWire 800 drive, you'll need a Thunderbolt-to-FireWire adapter.

Besides everyday tasks, you can use the Air for editing short videos or for working with JPEGs from your iPhone or camera.

MACWORLD'S BUYING ADVICE: This is a great laptop for someone who does general-purpose work and moves around a lot. You can't easily upgrade the storage after purchase, so you should buy the model that has the largest amount of storage you can afford.

Macworld Lab Test
Speedmark 9 Score

MacBook Air/1.3GHz (dual-core, Mid 2013)	143

MAC MINI

WHAT IS IT? The Mac mini (go.macworld.com/macmini) is Apple's entry-level desktop Mac. Though slower than Apple's other desktops, it's still fast enough for general-purpose use.

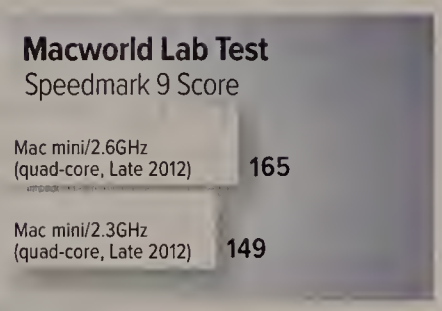
WHO IS IT FOR? First-time Mac users. The Mac mini is also ideal as a secondary Mac in your home.

WHAT ARE THE SPECIFICATIONS? What makes the Mac mini stand out is its small size. Apple sells two Mac mini models. The $599 model has a 2.5GHz dual-core Core i5 CPU and a 5400-rpm, 500GB hard drive. The $799 version has a 2.3GHz quad-core Core i7 processor and a 5400-rpm, 1TB hard drive. Both come standard with 4GB of memory and an Intel HD Graphics 4000 graphics processor.

The Mac mini doesn't include a display, a keyboard, or a mouse, so you must supply your own, or customize your order to include them, at extra cost.

The Mac mini has Wi-Fi and Bluetooth, plus four USB 3.0 ports, one Thunderbolt port, an SDXC card slot, a FireWire 800 port, and a gigabit ethernet port.

To connect a display, you can use either the HDMI port or the Thunderbolt port. If you own a display with VGA and/or DVI output, you'll need either the Mini DisplayPort-to-VGA Adapter or the Mini DisplayPort-to-DVI Adapter, which cost $29 each.



MACWORLD'S BUYING ADVICE: For new Mac users switching from a PC, the Mac mini is an excellent machine. It's a great choice for shoppers on a budget, or for a person who wants a second computer. If you need a Mac for heavy-duty work, consider buying an iMac, instead.

iMAC

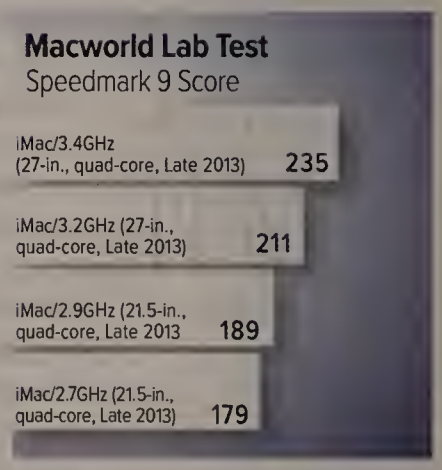
WHAT IS IT? The iMac is Apple's iconic all-in-one model. Made of aluminum, it has a built-in display. It also offers top-notch performance (go.macworld.com/imac).

WHO IS IT FOR? Both novices and demanding users. The iMac is ideal for someone who needs to buy a complete computer setup (keyboard, mouse or trackpad, and display) and wants to maximize workspace efficiency.

WHAT ARE THE SPECIFICATIONS? Four models are available, along with certain upgrades. Two have 21.5-inch displays; the others have 27-inch displays. All iMacs come standard with 8GB of memory and a 1TB hard drive.

The 21.5-inch, $1299 iMac has a 2.7GHz quad-core Core i5 processor and Intel Iris Pro integrated graphics. The 21.5-inch, $1499 iMac includes a 2.9GHz quad-core Core i5 CPU and a discrete Nvidia GeForce GT 750M graphics processor with 1GB of video memory.

The 27-inch, $1799 iMac has a 3.2GHz quad-core Core i5 processor and a discrete Nvidia GeForce GT 755M graphics processor with 1GB of video memory. The 27-inch, $1999 iMac has a 3.4GHz quad-core Core i5 CPU and a discrete Nvidia GeForce GTX 775MX graphics processor with 2GB of video memory.



MACWORLD'S BUYING ADVICE: For new Mac owners, the $1299 iMac is a good alternative to the Mac mini. If performance is your top priority, consider investing in a Fusion Drive upgrade. The 27-inch iMacs are ideal for demanding users.

MAC PRO

If you do professional work calling for an extreme processing capability, the Mac Pro will serve you well.

WHAT IS IT? The redesigned Mac Pro, Apple's workstation, is a powerful and flexible machine (go.macworld.com/macpronew).

WHO IS IT FOR? The Mac Pro is ideal for professionals who work with applications that can use as many processing cores as possible—video-editing applications, 3D programs, and the like.

WHAT ARE THE SPECIFICATIONS? The Mac Pro comes in two standard configurations. Both have 256GB of flash storage. The $2999 version has a 3.7GHz quad-core Xeon E5 processor, 12GB of memory, and dual AMD FirePro D300 graphics processors with 2GB of video memory. The $3999 Mac Pro has a 2.5GHz six-core Xeon E5 processor, 16GB of memory, and dual AMD FirePro D500 graphics processors with 3GB of video memory.

Various build-to-order options are also available.

Unlike the previous Mac Pro, the new model has no internal options for connecting PCI expansion cards or internal storage drives. It relies on its six external Thunderbolt 2 ports for add-ons.

Wi-Fi and Bluetooth come built-in. The machine has four USB 3 ports, dual gigabit ethernet jacks, and HDMI, but no FireWire connections.

Apple says that the new Mac Pro is a "video editing powerhouse" capable of handling 4K video editing, that 3D applications will see "ultrafast rendering," and so on. Our initial tests substantiate those claims. If you use Final Cut Pro X, you'll see huge performance gains. For applications that can take advantage of the maximum number of processing cores available, the Mac Pro truly shines.

MACWORLD'S BUYING ADVICE: If you do professional work calling for an extreme processing capability, the Mac Pro will serve you well. If you're a power user who doesn't need expansion capability, and uses iLife often instead of pro apps, consider an iMac or a Retina MacBook Pro instead.

One caution: The Mac Pro is in short supply. At this writing, it may take at least 6 weeks for your new Mac Pro to arrive.

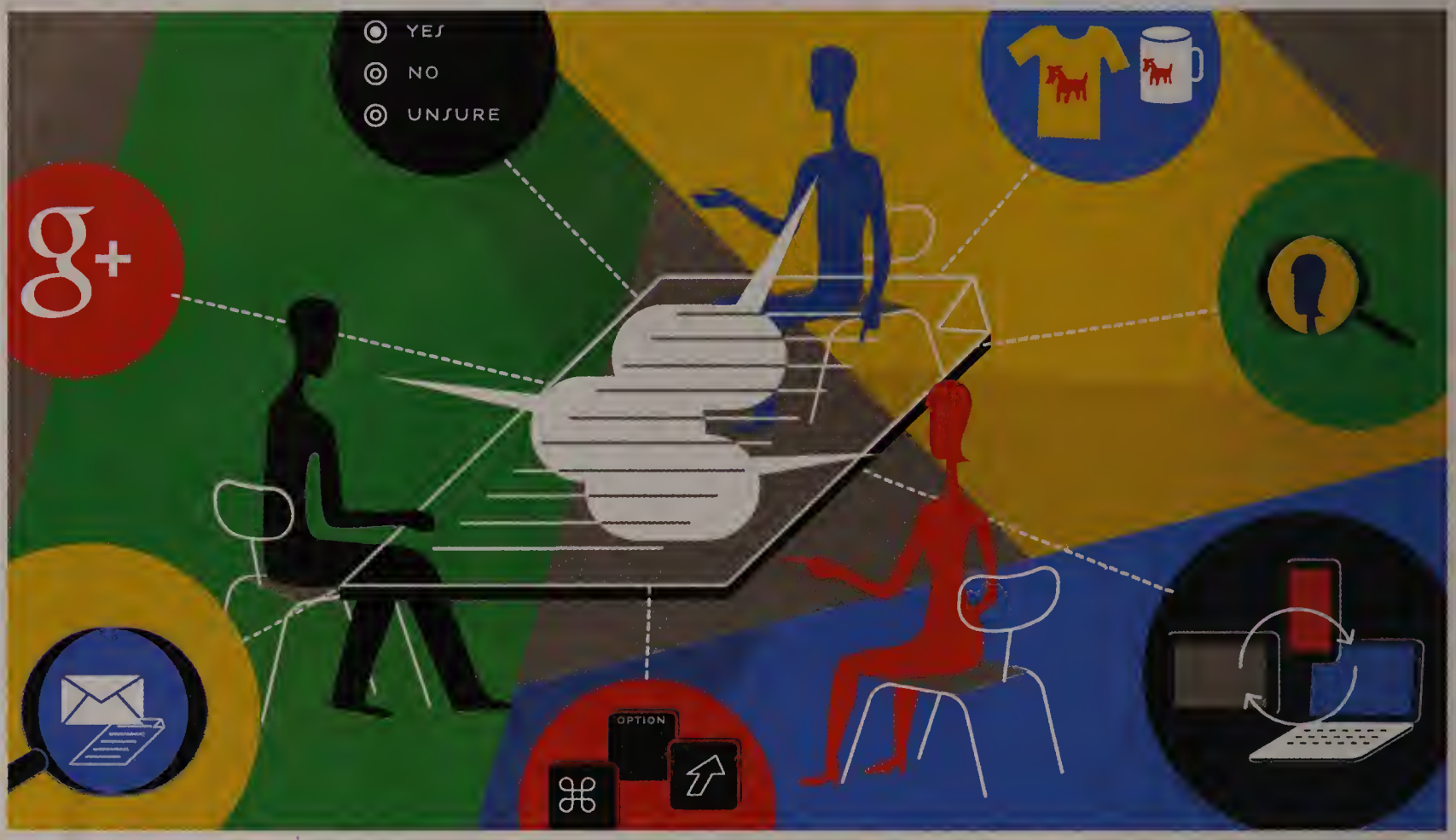
Macworld Lab Test
Speedmark 9 Score

Mac Pro/3.0GHz (8-core, Late 2013)*	350

*Customize to build model.

Working Mac

Tips, Tricks, and Tools to Make You and Your Mac More Productive



Unleash Google Drive

Tap into the Web productivity suite's many powers with these 14 tips.

BY DAVID CHARTIER

Google's free productivity suite, Google Drive, is packed with tools to help people work together using little more than a browser. Make sure that you're taking advantage of all it has to offer with these tips.

1. Search by Person

Google recently added the ability to search not only by document name, but also by the name of anyone who shares documents with you. This is perfect if you can't remember a document's name, but you do remember who shared it. To use this feature, navigate to your drive in a Web browser, click the *Shared with Me* link in the navigation bar on the left, and then enter a person's name in the search field. All documents owned by them (or shared with the two of you) will appear.

2. Search Google Docs and Gmail

If you use Google Drive, it's a safe bet that you also use Gmail. Save time by using Gmail's search box to search both places: Navigate to Gmail, click the *Gear* icon, and then choose *Settings* from the menu that appears. Click the *Labs* tab and enable the *Apps Search* option. Now when you use Gmail's search box, any relevant Google Drive documents will appear beneath the Gmail results.

3. Sync Files Across Your Devices

Think of this feature as "Google does Dropbox." The free Google Drive for Mac service (go.macworld.com/dlpage) creates a folder on your Mac that syncs all your files with your Google storage space—even those files that you can't edit with Google Drive apps. When you consider that Google gives everyone 15GB of free space and offers generous paid upgrades if you need more, Google

ILLUSTRATION BY OTTO STEININGER

Drive makes a great first step into the Google-powered cloud.

4. Save to Drive While Browsing

If you use the Google Chrome Web browser (⌘⇧⌥⌃; go.macworld.com/gc), the 'Save to Drive' Chrome extension (go.macworld.com/std) makes it easier to right-click and save just about anything you find straight to Drive.

5. Chat as You Collaborate

Want to be able to converse in real time within a document while you're working on it with others? When you see one or more collaborators appear at the top of the document, a *Chat* button appears. Click it to start a conversation to the right of the section you're working on. The conversation stays with the file even if you share the file with new collaborators or move it elsewhere on your Drive.

6. Get Social With Your Docs

Naturally, Google built some handy Google Drive tools into Google+, its social network. You can click the *Share* button at the top right to share a document with your Circles and get feedback, and you can show the files to others while in a Google Hangout.

7. Tap Into Apps

Want to whip up some fun gifts? Use your Drive documents and photos at Cafepress (go.macworld.com/cafe) to create mugs and T-shirts. The Spreadshirt Designer for Google Drive (go.macworld.com/spreadshirt) is also full of possibilities. You can fax files directly from Google Drive with HelloFax (go.macworld.com/hello), or use Wappwolf Automator for Google Drive (go.macworld.com/wwolf) to sync your drive with Dropbox, Evernote, Amazon's Kindle, Google's Picasa, and others.

8. Try Drive's Keyboard Shortcuts

What list of tips for a productivity suite as extensive as Google Drive would be complete without a mention of keyboard shortcuts? This list of shortcuts (go.macworld.com/shortcuts) will help you work faster in Google Drive.

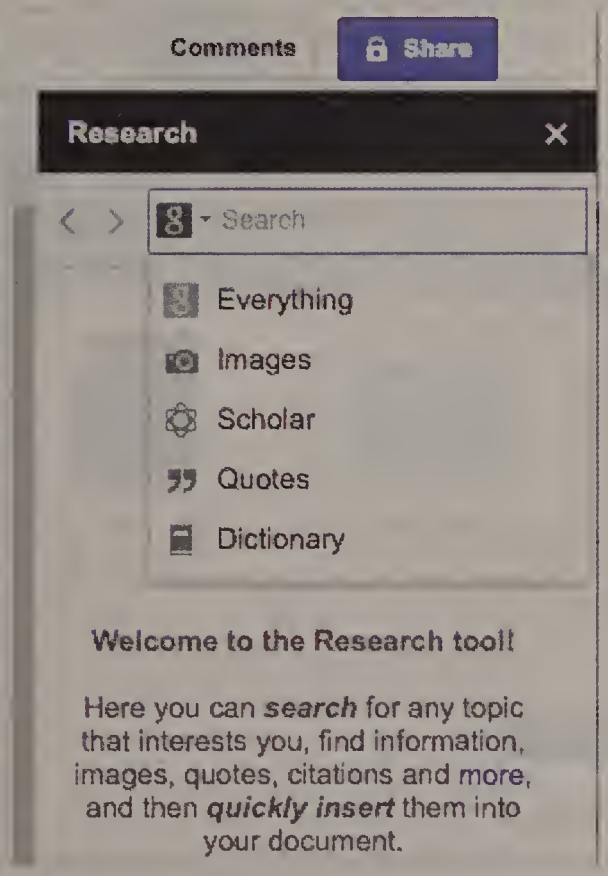
9. Use the Research Pane

When you're working in a document, having to open a new tab or webpage to see source documents is a pain. Instead, select *Tools* → *Research* to open a research pane right inside a document that you're working in. Not only is this convenient, but the pane presents tools that let you easily cite and source content. You can also drag and drop images straight into your document.

> To make forms even more useful, Google has added some customization options including progress bars, data validation, and embedded YouTube videos.

10. Customize Google Forms

Google Drive's Forms let you build surveys and collect data for just about anything you can imagine. You can turn a spreadsheet into a form or use the new Form option (select *Create* → *Form*) in your Drive. To make these forms even more useful, Google recently added some customization options that allow for things like progress bars, data validation, and embedded YouTube videos.



Keep an Eye on Research Use the Research pane to view source documents as you work in your own file.

11. Easy Table of Contents

If you need a way to navigate large documents or simply add a table of contents, the *Insert* menu's *Table of contents* item has you covered. As you build your table, apply headings to content by selecting *Format* → *Paragraph styles*.

12. Edit Presentation Master Slides

The Slides feature is Google Drive's hidden gem, letting you create presentations à la Keynote and PowerPoint. Now, you can also edit a theme's master slides (go.macworld.com/slides): Pick your theme, and then simply select *Slide* → *Edit master menu*.

13. Work With Non-Drive Users

If you want to work on files with people who don't use Google Drive—and to do so on your mobile device—Google's recently acquired (and now free) app, Quickoffice for iOS (go.macworld.com/qoios) and for Android (go.macworld.com/qoandroid), can help. Either version of this popular app reads and edits Microsoft Office files, and, if necessary, the app can also transition documents into your Google Drive account.

14. Work With Files Offline

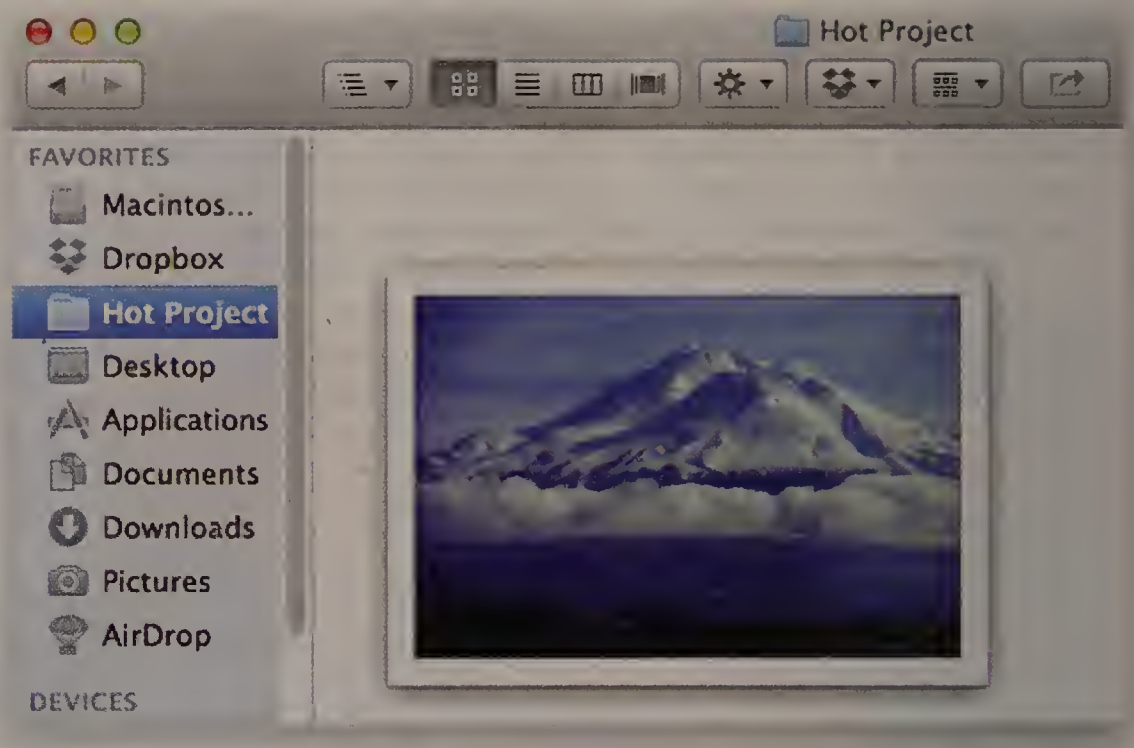
Want to access your Google Drive documents even when you're offline (on a long plane trip, perhaps)? Google's instructions (go.macworld.com/offline) will guide you through installing an app from the Chrome Web Store to take Google Drive offline. As of this writing, you can work offline in your browser to view and edit documents, presentations, and drawings, and you can also edit spreadsheets as long as you switch to the new version of Google Sheets (go.macworld.com/sheets).

Save Time With OS X's Sidebar

Get one-click access to the files and folders you use the most.

BY KIRK McELHEARN

OS X's Finder is your window onto the documents, spreadsheets, photos, and other files you've tucked away on your Mac and on other connected computers and drives. One often-overlooked Finder tool is the sidebar, the left-hand section of every Finder window where you see small icons and names for folders and other items. The sidebar is intended to give you one-click access to the items you use most often. To make sure it serves your needs, tweak both what the sidebar displays and the way it displays it.



Fast Access Store folders for current projects in the sidebar (and remove them when done).

See More or Less

First, customize the Finder's built-in guesses about what items matter to you. In the Finder, choose *Finder → Preferences* and click *Sidebar*. Here you'll see a list that you can pick and choose from by checking or unchecking items. OS X Mavericks groups items in the sidebar under four headings: Favorites, Shared, Devices, and Tags. Favorites include AirDrop, Applications, and Downloads, as well as your home folder and its subfolders, such as the Desktop, Pictures, and Movies. Shared items include connected servers as well as 'Back to My Mac', and any computers on a Bonjour network. Devices include your own hard drive, as well as connected external disks, iOS devices, and more. The newest entry to the sidebar is Tags. Select it to make recently used tags appear in the sidebar for easy access.

Get Rid of Extra Sidebar Items If your sidebar becomes too lengthy to be useful, you can remove an unnecessary item from it by right-clicking the item and choosing 'Remove from Sidebar'.

The more items you check, the longer the sidebar becomes, which means you may need to scroll down to see some of the items if there are too many. Better to be picky. Pay particular attention to items you never use. If you don't use AirDrop, for example, uncheck it to save space. If you don't care about seeing your Mac in Devices, uncheck that as well.

There are some default items that don't appear in the Finder's Sidebar preferences. For example, Remote Disc shows up in the sidebar's Devices section. (What is Remote Disc, you might ask? It's a way to access a CD or DVD on another Mac.) If you don't use this item, remove it manually by clicking on it in the sidebar and then dragging it off the window until it disappears in a puff of smoke. You can also remove any specific disk or volume; note that it will not display again in the sidebar—even after you restart your Mac—unless you add it back.

Add Anything

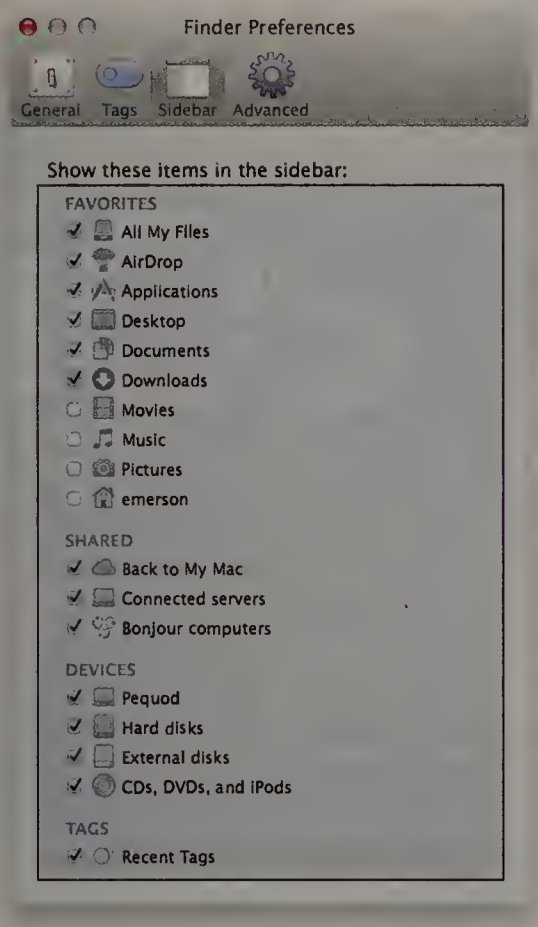
You can add anything to the Finder sidebar: a file, a folder, or an application. I don't recommend adding applications, though; it makes more sense to put them in the Dock. But if you use a certain folder or file often, say, for a project you're working on, you can

add it to the sidebar for one-click access. Since sidebar space is limited, choose only items that you need to access frequently.

If you want to add a folder, drag it to the sidebar. Position it between any two items in the Favorites section. Note that dragging works only for folders. To add a file or application to the sidebar, you need to use either a menu item or a keyboard shortcut. Select the item, then choose *File* ➝ *Add to Sidebar*; or press ⌘-<Control>-T. The item will be placed at the bottom of the Favorites section.

Remove Anything

When you're done working on a project, you can remove its folder or file from the sidebar to make way for new things. To do this, <Control>-click (or right-click) on the item and choose *Remove from Sidebar*. You can do this for any item that you want to remove, even one you've selected in the Finder preferences I discussed earlier. If you remove an item that appears in the preferences, you can easily add it back by accessing Sidebar preferences again.



Set Up Your Sidebar Choose what you want to see in the Finder sidebar by checking and unchecking items in this preference pane.

Move Items Around

Once you've added items, it's easy to rearrange them. Just select an item and drag it to a different position so that the list makes sense for your purposes. However, items must stay in their sections—favorites in the Favorites section, devices in the Devices section, and so on.

If you use tags, you can change their order in the Tags section. They're listed in a ROYGBIV, rainbow-style order by default, but you might want to put Green on top, Red next, and then Yellow if you use those tags most often.

Move Sections

You can move any of the sidebar's sections (Favorites, Devices and so on) to change the order in which they display. Just click on the section name and drag it to a new location. For example, if you often use shared volumes, drag *Shared* to the top. If you're a heavy user of tags, drag that section to the top, or to a higher position than where it is by default.

See the Sidebar More Clearly

Once you've set up the sidebar the way you want it, you might realize that you're still squinting to read it. Since Apple removed color from the sidebar icons, they all look alike. Happily, you can change the size of the icons and their text, though the setting for this is hard to locate. It's not in the Finder's preferences; instead, go to System Preferences and click on the *General* tab. Look for the Sidebar icon-size menu, and choose from three sizes: Small (the default size), Medium, or Large. Be sure to have a Finder window open when you make this change—the font size changes on the fly, so you can see instantly which size is best for you. The larger you make the icons, the larger you might want your Finder windows to be so that it can display enough sidebar items.

With these tips, you can customize your Finder sidebar so it gives you quick access to the folders and other items you use most. Take a few minutes to set up the sidebar, and you'll save time as you work.

Tone Down iOS 7

iOS 7 is a radical departure from previous versions, and some people aren't entirely comfortable with it. Here are some tips for making it easier to use.

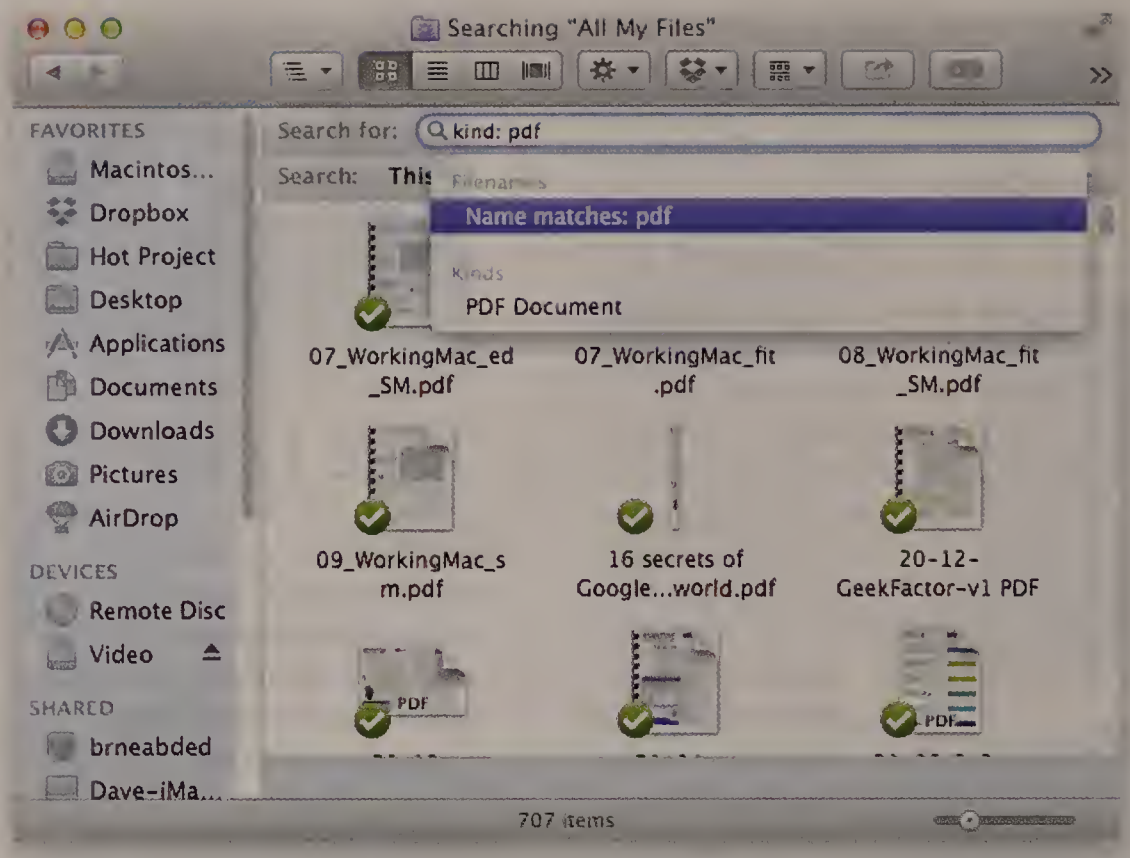
Make Text More Readable

The text in iOS 7 is thinner than in earlier versions of Apple' s mobile operating system. If you have trouble reading it, tap *Settings* ➝ *General* ➝ *Text Size* and move the slider to the right. This increases the size of *some* of the text on your iOS device. Open the Notes app, for example, and you'll see that the text size has enlarged. This is also true in Mail, Messages, and Reminders, but not in Contacts or Calendar.

Still squinting? You can also make text bold by going to *Settings* ➝ *General* ➝ *Accessibility* and tapping *Bold Text*. One other thing you can do is to go back to *Settings* ➝ *General* ➝ *Accessibility* and turn on *Increase Contrast*. As the name implies, this setting improves the contrast of text on some backgrounds, which will make some text more legible.

Reduce the Motion

And if you're one of those people who gets a little queasy with the device's parallax effect—where the background seems to move behind the home screen's icon—flip on the *Reduce Motion* setting, which you'll also find in the *Accessibility* settings.—CHRISTOPHER BREEN



Find Your PDFs Get started by finding all your PDFs with a targeted search.

Organize Your PDFs With Apple's iBooks App

iBooks isn't just for books—you can corral PDFs with it, too.

BY SERENITY CALDWELL

Thanks to OS X Mavericks's new iBooks app (www.apple.com/apps/ibooks), it's easy to store and read your ebooks (as long as they're in the .epub or .ibooks format). But you can also keep PDFs in iBooks, and even organize them—though Apple's tools still leave a bit to be desired on that front.

Add Your PDFs

Adding PDFs to the iBooks app is easy. Just drag and drop them onto the iBooks screen, or select *File* → *Add to Library* (⌘-<Shift>-O) and select the applicable file.

Unlike the old iBooks section in iTunes, the iBooks app doesn't let you alter metadata for books you've added yourself—so if your PDF has a weird name and author, you may have to adjust that in a different program (like Adobe Acrobat) before adding it to iBooks. In addition, when you add a book to your iBooks library, you're not transferring the actual file—you're transferring a copy of it.

Organize Your PDFs

Once you've added your PDFs to iBooks, you can view and organize them by visiting the Collections tab. Click on PDFs to view all your files. Press the plus (+) button in the lower-left corner of the screen to add a new collection. You can create a collection called Scripts to hold all your theater PDFs, for instance.

Unfortunately, while collections sync across devices, PDFs and ePubs not purchased from the iTunes Store won't sync—meaning that your PDF library is stuck on the computer you organize it on.

Peruse Your PDFs

Just as with ebooks, you double-click a PDF to open it. iBooks doesn't actually open PDFs stored in the app—instead, it punts them over to Apple's Preview. Should you choose to annotate those files, you'll have to make a separate copy and re-upload that version to your iBooks library.

iBooks may not be perfect, but it's a decent organizational tool for grouping your books and PDFs locally on your computer.

Osprey Beta Port Messenger Bag

What's special about Osprey Packs' $99 Beta Port (www.ospreypacks.com)? If you lift the front flap, a see-through panel sealed by a zipper lets you use your iPad without removing it from the bag. I was able to read, reply to emails, check my schedule, and handle other easy tasks without worrying that someone would swipe my device. The main compartment is sealed with a zipper that opens to reveal a padded laptop sleeve, a lined zippered section, and a pocket compartment. Officially, this bag accommodates a 15-inch laptop, but I found that nothing bigger than a 13-inch MacBook would fit. And even then, there wasn't a lot of room left over for all my day-to-day items. If you roll a little lighter than I do, you'll likely be thrilled with the Beta Port, especially if you want your tablet safely tucked away and yet magically accessible at the same time.—AMBER BOUMAN

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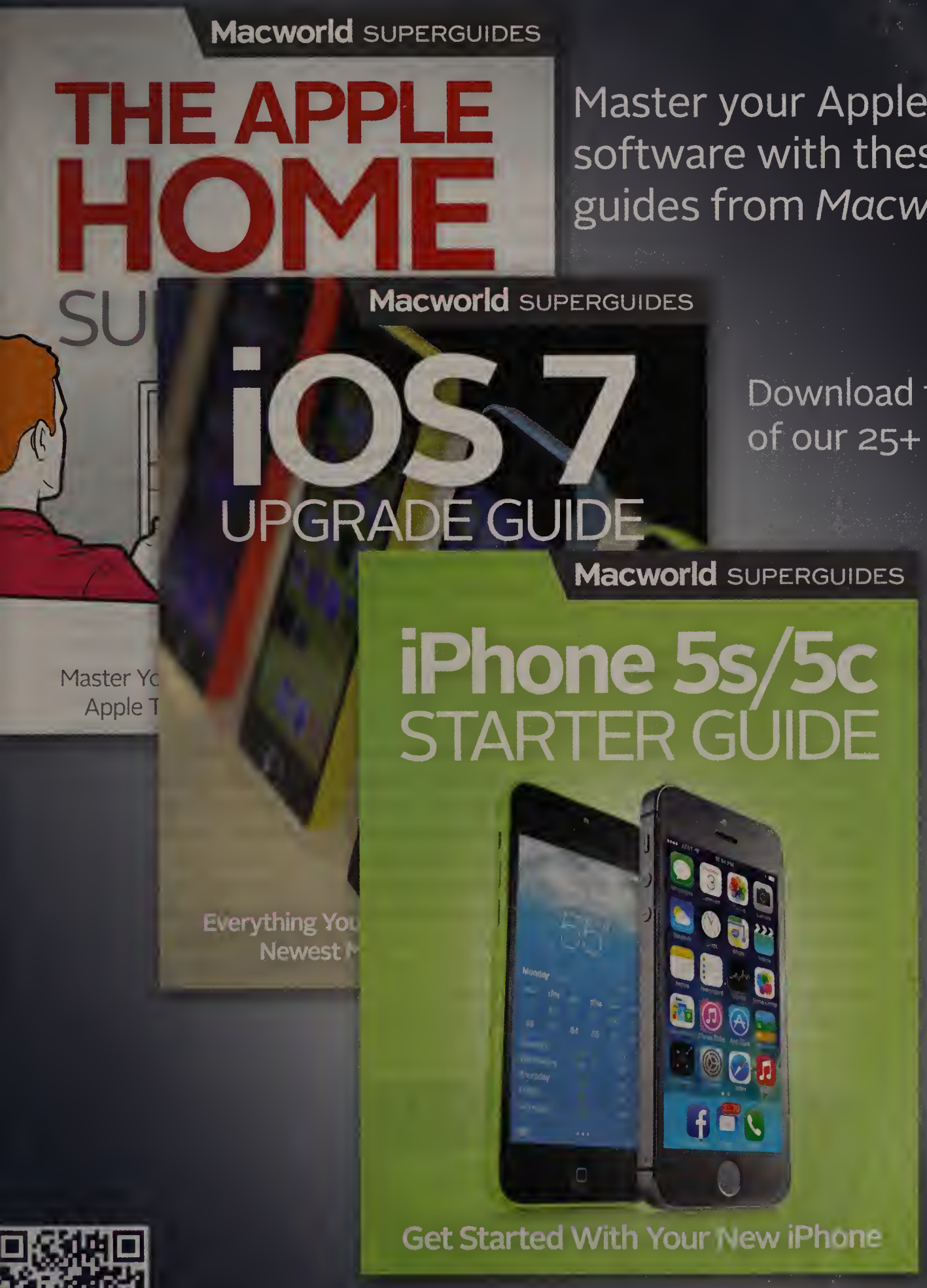


macworld.com/superguide

Reviews

Hardware and Software for All Your Business Needs

Hardware

Angelbird SSD2go

♦♦♦♦; $450; Angelbird; www.angelbird.com

Do you like your portable drives with a splash of color? Check out Angelbird's USB 3.0 bus-powered SSD2go. You can pick one color for the case and another for the backplate. The 0.4-inch-thick solid-state drive is the size of an iPhone 5c and comes in three capacities: 128GB ($280), 240GB ($450), and 480GB ($790). We tested a silver 240GB model with a blue backplate.

Angelbird uses top-notch components in its drives—which probably accounts for its higher-than-average prices—and the unit we tested performed impressively. In our Mac tests, the drive wrote a 10GB file at 219 megabytes per second and read the same file at 403 MBps. It wrote a 10GB folder of files at 189 MBps and read that folder at 310 MBps.

One curiosity is that the USB 3.0 port on the device is a Type A. That means the cable needs to have two Type A connectors, which isn't common. One cable comes in the box, and you can buy more; but if you misplace it, you most likely won't have this type of cable lying around.

The Angelbird drive is a fast, customizable SSD that fits in a pocket, but at a price that may not fit your budget. —JAMES GALBRAITH

HP Envy 5530 e-All-in-One

♦♦♦; $130; HP; www.hp.com

The $130 HP Envy 5530 e-All-in-One color inkjet multifunction stands out among low-cost home printers for having above-average print quality and a new, cloud-controlled Instant Ink program that offers lower-cost inks.

The compact Envy 5530 handles low-volume home use nicely. It's exceptionally easy to set up and use, and the output is attractive. Text is clear and sharp, even in draft mode, and color graphics are surprisingly accurate. You might want to tweak the photo settings a bit to get a warmer color temperature on glossy photos, but that's about it.

The trade-off for that high print quality is slow speed. The Envy 5530 managed a poky 5.9 pages per minute when printing plain text and a few simple monochrome graphics. It printed 4-by-6-inch photos at 2.5 ppm on plain paper, but 0.8 ppm on glossy paper.

The HP Envy 5530's other weak spot is its expensive inks. The standard 61 series black and tricolor cartridges come out to 7.5 cents per page for the black and 12.75 cents per page for the colors, or a daunting 20.15 cents for each four-color page.

Thankfully, HP offers a new Instant Ink service, which sells you capacious cartridges, and then doles out the ink on a monthly basis. You can print 50 pages of anything—text, or a heavy-coverage photo—for $3 a month, 100 pages for $5 a month, and 300 pages for $10 a month.

Among low-cost home printers, the 5530 is a standout.—JON L. JACOBI

Seagate Central

♦♦♦½; $150; Seagate; www.seagate.com

Network-attached storage—or NAS—devices can be quite useful, especially in a home with multiple computers. To make NAS easier for home users, Seagate created Central.

Central is a single-drive unit, so it's smaller and quieter than the typical multidrive NAS box. However, the disadvantage of its small size is that you don't get a second drive and the data redundancy that it offers, so you must manually back up the drive's files.

The initial setup is pretty painless. After that, you can log in to Central through the Finder, and then drag and drop files back and forth between your Mac and Central. You can also use Central as a destination for Time Machine backups and as a place to store your music in iTunes. In our lab tests, Central posted pretty good file read and write speeds, although—no surprise—it was slower than multidrive NAS devices.

Seagate provides remote access to Central through a Tappin-based service. Mobile apps for iOS, Kindle, and

Android offer another route, but they are limited. I was able to access a private folder through Safari on an iPad.

Seagate Central is an easy way to add network storage to your home network, but you'll need to manually make backups of your Central data in case the single-drive unit fails. Its mobile apps are limited, but Central works well when accessed from a computer.—ROMAN LOYOLA

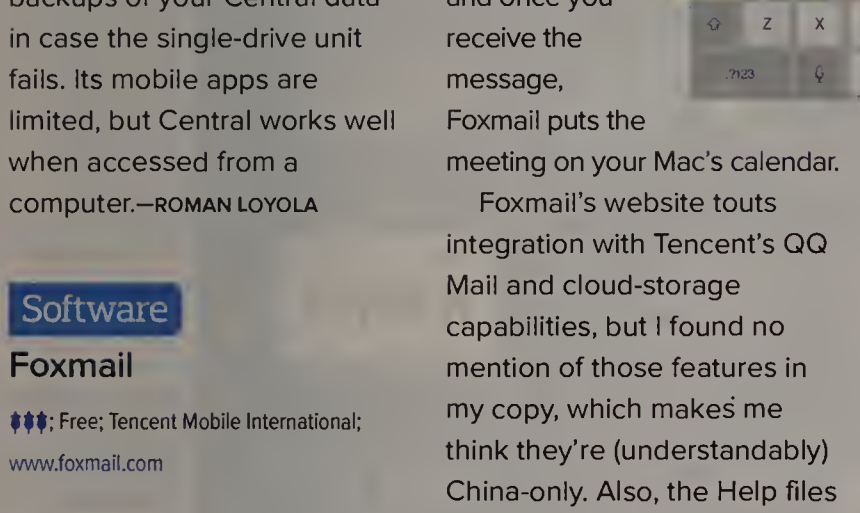
Software

Foxmail

★★★; Free; Tencent Mobile International; www.foxmail.com

Foxmail 1.2, the new free email client from China-based company Tencent, is better than some foreign imports I've seen. But it doesn't quite clear the language barrier.

Foxmail's interface is simple to the point of being spartan. Its quick-reply window highlights one of Foxmail's big strengths—and weaknesses: It tends to conceal features (including its better ones), leaving no obvious cues for finding them. Only by accident did I discover how to refresh mail (by tugging down on the message-list column). Likewise, hidden in a menu in the "compose message" window is Foxmail's system for bundling meeting invitations with messages: You specify the meeting details, and once you receive the message, Foxmail puts the meeting on your Mac's calendar.



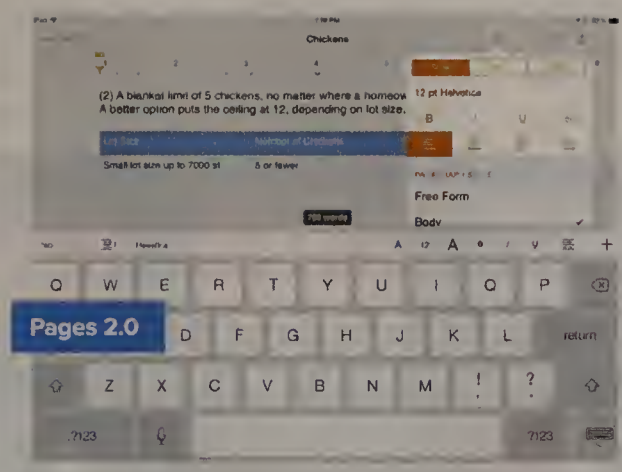
Foxmail's website touts integration with Tencent's QQ Mail and cloud-storage capabilities, but I found no mention of those features in my copy, which makes me think they're (understandably) China-only. Also, the Help files are entirely in Chinese.

Foxmail works fairly well. But given the lack of English help, I can't imagine why non-Chinese speakers would use it.—NATHAN ALDERMAN

Pages 2.0 for iOS

★★★½; $10; Apple; www.apple.com

The revamped Pages for iOS gives your iOS device the same tools, features, and file formats found in the desktop app—with a few exceptions. iOS doesn't support all the fonts the desktop app does, for instance, so if you start creating a file on your Mac, you may not see an exact replica on your iOS device.



All versions now ship with the same 60 templates, giving you a convenient starting point for your documents. I was disappointed to find that the iOS apps lack the Mac version's option to remove body text from a document, which turns a normal word processing file into a page layout canvas.

Text editing on the iPad works as it does on the Mac, but the iPad app displays a convenient text-formatting menu whenever you edit text—a feature the Mac version could benefit from. Editing table data, however, is frustrating, requiring too many taps for what should be a one-tap process. And Pages for the iPhone is hamstrung by the size of the device's workspace.

The biggest problem I had working with Pages was with page-layout files. Because white space at the edge of documents is limited, I often found myself grabbing and moving objects by accident.

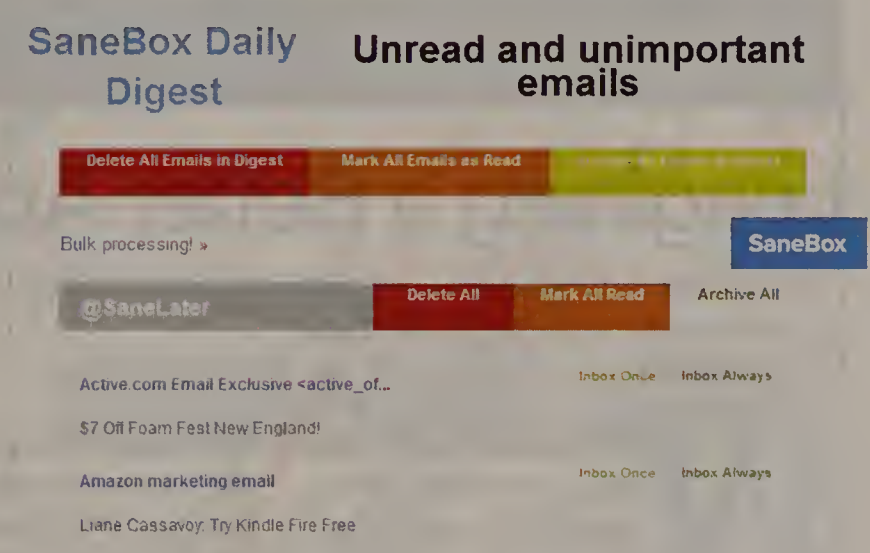
Still, Pages for iOS gives you much of what you need to create beautiful documents on iOS devices.—JEFFERY BATTERSBY

SaneBox

★★★½; $6 per month; SaneBox; www.sanebox.com

SaneBox delivers on its promise of bringing order to your inbox. The cloud service works with any IMAP-based email service. You enter your email address on the website and grant SaneBox access to your account, and it then analyzes the contents of your inbox. It decides which emails you need to see now and which can wait until you're ready to deal with them. SaneBox did a remarkably good job of whittling my Gmail inbox from 1000 unread messages to 86. It doesn't delete emails; rather, it files them into folders it creates.

A new Sane Attachments feature lets you control whether attachments land in your inbox.—LIANE CASSAVOY



Playlist

Everything You Need to Know About iPods, iTunes, and Mac-Based Entertainment

Growing Selection The Apple TV has gained new channels.

Imagining a Better Apple TV

Here are six ways Apple could improve the set-top box's interface.

BY DAN MOREN AND JONATHAN SEFF

With the recent proliferation of new channels on the Apple TV, the set-top box has gone from providing a simple way to consume online content to offering an embarrassment of riches. More than 25 streaming-content sources are available, and though managing them isn't yet as daunting as scrolling through the channel guide on your cable box, it's approaching that level of complexity.

So it's time for Apple, the company vaunted for its elegant and adroit handling of interfaces, to rethink the way users interact with its living-room device. Here are half a dozen steps Apple could take.

1. One Search to Rule Them All The fragmentation of streaming services today rivals that of the Android smartphone scene. Take Fox's—ahem—dark-horse hit *Sleepy Hollow,* for example. You can watch it the next day on Hulu, buy it from iTunes or Amazon, stream it from Fox's website, or watch it via an app from your cable provider (in some cases). We wouldn't be surprised if you could even have it delivered directly to your brain at this point.

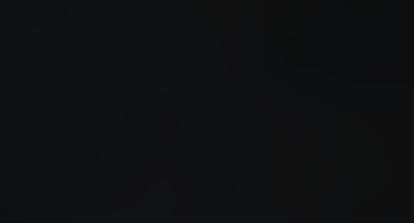
Not all shows are available in so many ways, however. And you shouldn't have to browse a bunch of services before you find the show you want—or to end up buying a movie when you could have streamed it on Netflix for free. We need a universal search on the Apple TV that lets users enter—or perhaps just speak—what they want to watch, and makes the device show their options. Even better would be the ability to jump to the appropriate content channel and to start playing the desired item with a single button push.

A few websites—Can I Stream.it? (canistream.it) being perhaps the most popular—already try to facilitate this. In 2013, Apple acquired Matcha.tv, a company that provided a similar service, suggesting that this feature might be coming sooner rather than later.

2. Simplified Sign-On The only thing worse than struggling to wrangle the multitude of channels on the Apple TV is attempting to keep your login information straight for all of them. You may have accounts for iTunes, Netflix, Hulu Plus, maybe your cable provider, HBO Go...more services than you can shake a remote at.

Apple has tried to streamline the process by letting you bill some services—including Netflix and Hulu—through your iTunes account. No doubt Apple would be happy as a clam to have you buy all your video

FREE GIFT!



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services through iTunes, but plenty of users won't do so, or already have accounts at various providers. If Apple could find a way to simplify logins for those users, the Apple TV experience could be a lot smoother.

One possibility is to build off another recently introduced feature: the option to configure certain Apple TV settings by tapping an iOS device on the set-top box (go.macworld.com/iosappletv). Currently that trick works only for Apple's own data—but it would be great if the feature's purview could expand to more services.

Likewise, if Apple could centralize access to services that require you to verify your cable subscription, you would not have to enter that info more than once.

3. A Centralized Watchlist

As long as we're advocating the unification of search and sign-on, allow us to endorse the establishment of a clearinghouse for everything you want to watch. Rather than keeping a queue on Netflix, a list of favorites on Hulu, and a Wish List on iTunes, you could turn to a centralized repository on the Apple TV. Each entry could detail the services where the content is available.

That said, if you share your Apple TV with the rest of your household, you might want to maintain separate queues—keyed to your respective iOS devices, perhaps.

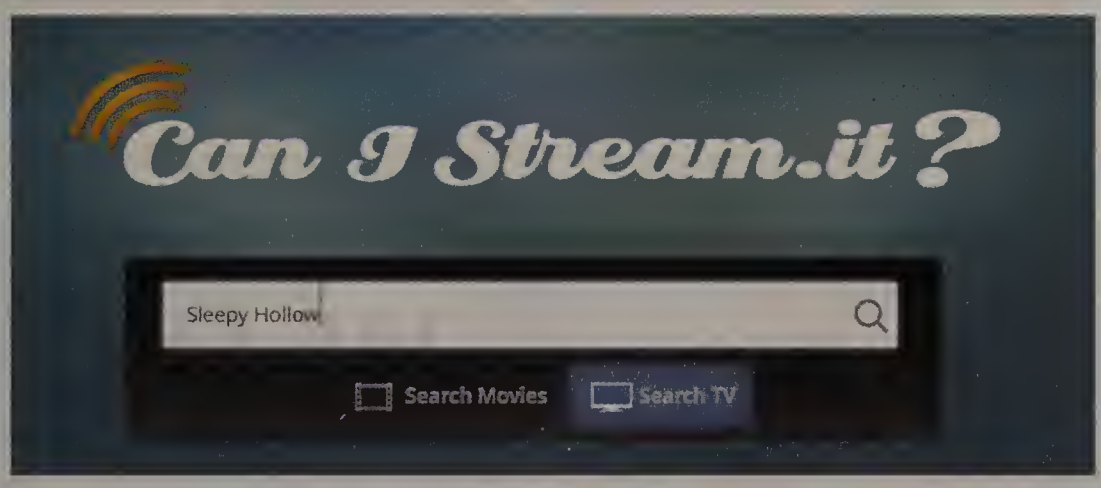
4. Smarter iOS Integration

Speaking of iOS devices, Apple's Remote app offers some advantages over the Apple TV's simple hardware remote. Notably, entering login credentials on its touch keyboard is easier than tapping out your login details character by character on the remote's directional pad.

But given that most Apple TV users probably also have an iOS device, it would be great if Apple offered even more integration, such as the ability to use Siri on your iPhone or iPad to prompt your Apple TV to play a specific show or movie.

The Apple TV needs a better front end on iOS devices. Remote mostly mimics a traditional physical remote—and it can be cumbersome because it doesn't provide the same tactile feedback. The iOS touch interface is potentially much more powerful, and it's not hard to imagine an Apple TV companion app that accommodates browsing, searching, and watching content on your Apple TV. And again, such an app could give multiple users in a household their own settings and watchlists.

> It's time for Apple, the company vaunted for its elegant and adroit handling of interfaces, to rethink the way in which users interact with its living-room device.



Search for Shows The Can I Stream.it? service helps you navigate streaming video options.

AirPlay provides an inverse version of this idea right now, but it reduces the Apple TV to nothing more than a screen. An app—or even features integrated into iOS—could bring more power to your interactions with your Apple TV.

5. Home-Screen Organization

Remember how folders on iOS devices helped bring (some) order to the chaos caused by a proliferation of apps? It's time to bring such organization to the Apple TV. You can already exploit a few tricks—using parental controls to hide content sources, for example, and reordering channels to put your favorites at the top—but they don't go far enough. (An easier way to turn individual channels on and off would be cool.)

Wouldn't it be nice to group channels according to your viewing habits? You could gather sports subscription channels into a folder or a home screen, say, or relegate the sources you don't use to another one. Apple's iOS Remote app (or its logical successor) could be a perfect tool for creating, naming, and filling such folders. Alternatively Apple might devise a way to use iTunes for this purpose.

6. Categories

Folders and home screens could allow you to customize what appears where—but what about letting Apple do some of the work, with a Categories setting? You could have the Apple TV sort channels into predefined categories such as subscription video services, music, photos, and children's programming. Then you could display channels by those groupings (as one interface with multiple sections) or by showing just the categories you've enabled in the Settings menu.

Some Work to Do

More content on the Apple TV is a good thing. It provides more incentive for cord-cutters and brings Apple's box closer to the likes of Roku. (To be fair, Roku has more than 1000 channels—but Apple is picking off the big names.) With greater content, however, comes greater responsibility to help users sift through it all. With a few tweaks, the Apple TV could make dealing with its expanding lineup simpler.

For more on the intersection of Apple technology and entertainment, check out Macworld/iWorld 2014 in San Francisco, March 27–29 (www.macworldiworld.com).

Get Lossless and High-Res Audio on iOS Devices

BY MICHAEL GOWAN

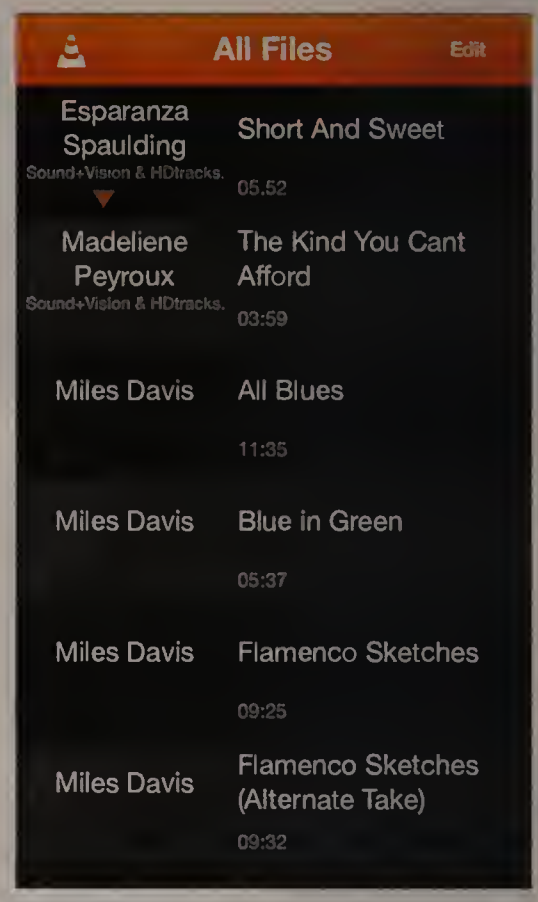
If you crave sound quality on a par with (or even better than) a CD but enjoy the freedom that comes from carrying music on your iPhone or iPad, it's time to look at lossless audio.

Files in formats such as Apple Lossless Audio Codec (ALAC) or Free Lossless Audio Codec (FLAC) are larger than MP3 and AAC files, but they tilt the quality/size balance in favor of sound quality. The algorithms shrink the file size but allow the original to be reconstructed exactly. Lossless files come in at 40 percent to 60 percent of the size of uncompressed CD files.

Listening to lossless files on an iOS device can be seamless or may require effort, depending on the format. For starters, Apple's Music app for iOS natively supports the company's own ALAC format. To listen to ALAC files, transfer them to your iOS device via iTunes as usual. The files will appear in the Music app.

If you prefer FLAC—a common format for live and classical music downloads—download an app such as the free VLC 2.1 for iOS (go.macworld.com/vlcios) or Dan Leehr's $10 iOS 7–only FLAC Player (go.macworld.com/flacplayer). Onkyo recently released HF Player (go.macworld.com/hfplayer), a free EQ app that offers a $10 in-app purchase to enable FLAC and other high-resolution audio-file playback.

With any of those apps, you have to transfer the files to your iOS device manu-



Versatile Player VLC for iOS brings FLAC playback to iOS devices for free.

ally. Connect the device to your Mac, launch iTunes, and select the device in the source list on the left. Click the *Apps* tab and scroll down to File Sharing. Click the app you want, and drag the music files into the documents list to the right (or click the *Add* button to choose the files via the Finder). The files will transfer immediately, and you should be able to play them through your selected app. (They won't appear in the Music app.) Alternatively, you can stash files in Dropbox and then open them in an app, although you have to download and open each track individually.

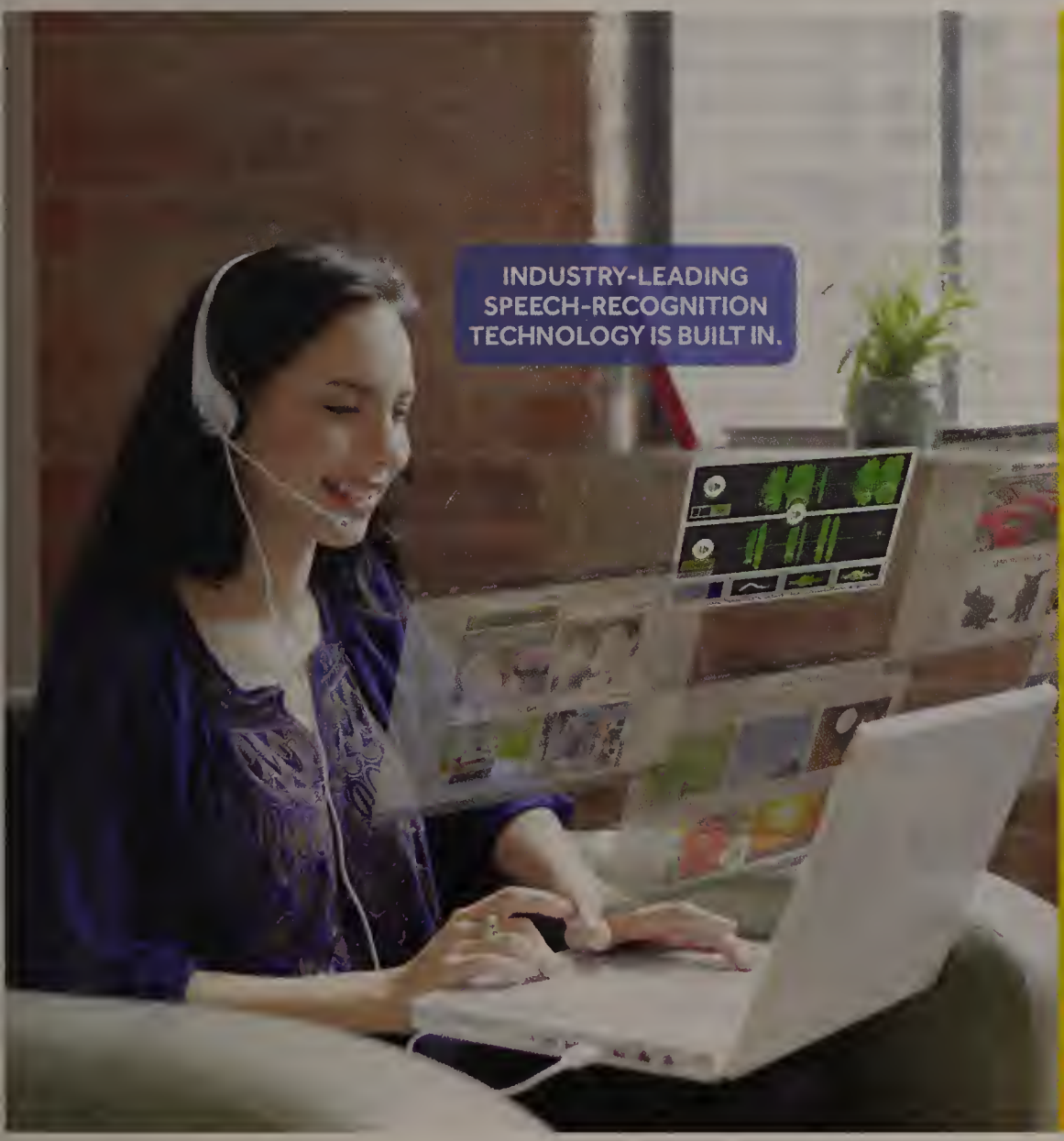
Up the Ante With High-Res Audio

If CD quality isn't good enough for your ears, you can raise the resolution with lossless formats. To get a true high-res file, however, you must start with a source that offers higher resolution than a CD. You can also buy high-res digital files from sellers such as HDTracks (hdtracks.com). Of course, the more information you add, the bigger that file becomes. For example, a 24-bit, 96kHz FLAC version of Sonny Rollins's "St. Thomas" fills about 143MB of space.

Apps such as VLC and HF Player can play high-res files, but there's a catch: What you can hear on your iOS device is limited by its headphone jack, which can reproduce only CD-quality sound (16-bit, 44.1kHz). Even AirPlay is limited to CD-quality audio (although it can handle 24-bit, 48kHz audio for video).

To unleash the fidelity of high-res files, you need a specially designed digital-to-analog converter, but few DACs are made to work with iOS devices. V-moda's $598 Vamp Verza is one option; Astell & Kern's $300 AK10 connects to your device's Lightning port and enables 24-bit, 96kHz playback. Other USB DACs, such as Audio Engine's $189 D3 24-bit DAC, can't connect directly, but you can use Apple's $29 Lightning to USB Camera Adapter in between.

Simple File Transfer Drag lossless files to your music app in iTunes to add them to your device.



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BY SERENITY CALDWELL

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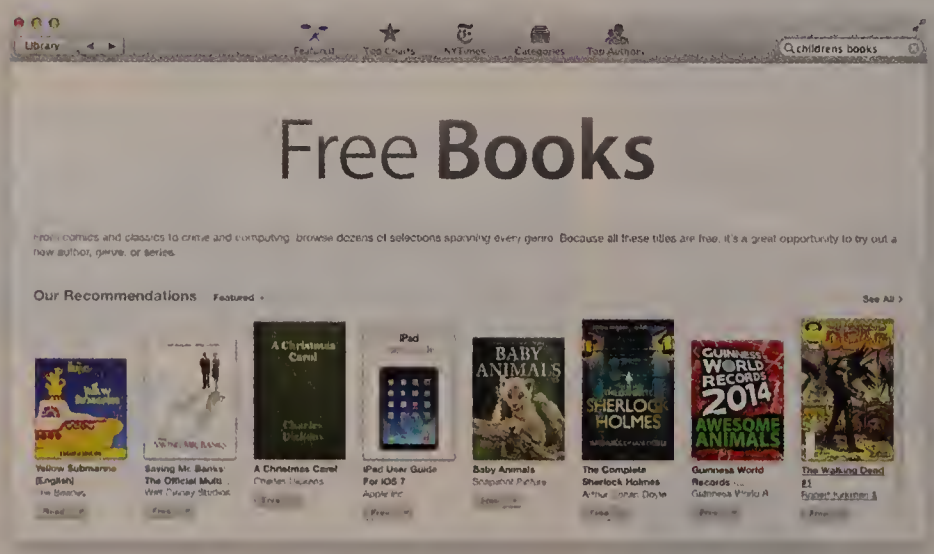

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Ask the iTunes Guy

Find and organize ebooks, build sophisticated smart playlists, and more.

BY KIRK McELHEARN

Q&A This month I answer two questions about iBooks. I also discuss moving the contents of an iTunes library, and I outline how to make a smart playlist with nested conditions.

Q: When I updated to Mavericks and my books transferred out of iTunes, some of my digital booklets (album liner notes) made the trip and some didn't. I was able to drag them out of iTunes to iBooks, but not vice versa. Newly purchased digital booklets stay in iTunes unless I move them. Is there a way to get the booklets back into iTunes if I want them there?

A: The solution depends on whether the items were in your Books library or Music library. In my case, those in the Music library (which is where items go when you buy them through iTunes) stayed in iTunes.

To add yours back to iTunes, drag them from iBooks to a folder, or to your desktop, and then drag them to iTunes. Next, select them all, press ⌘-I, click the *Options* tab, and set the Media Kind to *Music*. You may also need to edit the files' metadata so that they stay with their albums: On the Info tab, enter the correct artist and album names. Keep in mind that setting Media Kind to *Music* also means that if you rerun iBooks' import routine, these books won't move.

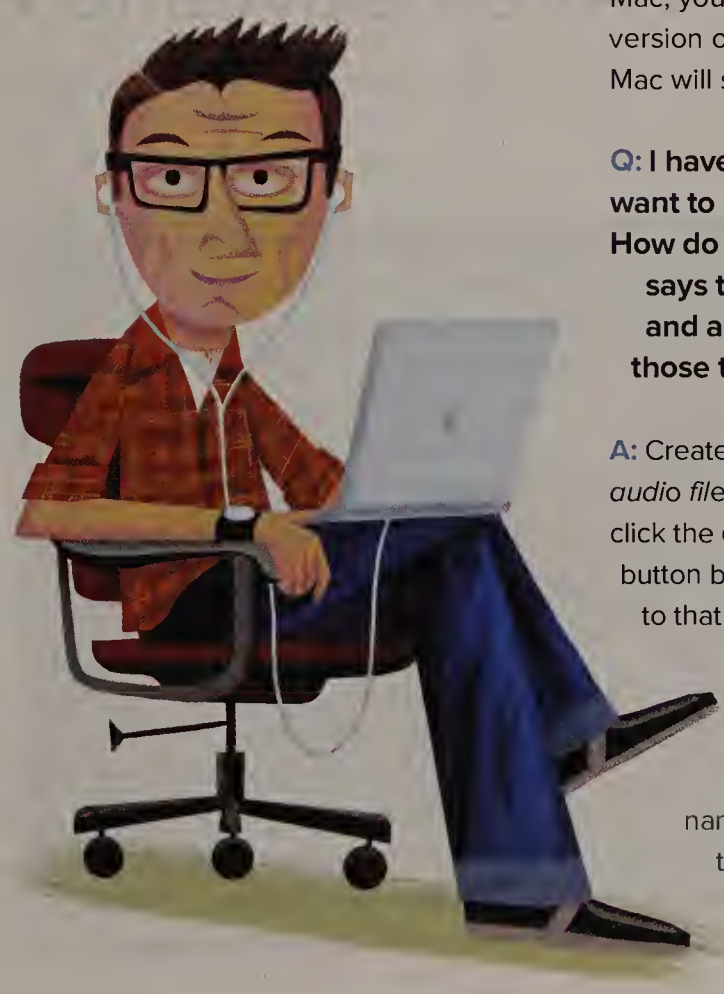
Q: Is there a way to edit the metadata of a book in iBooks? Previously, in iTunes, I could right-click an item, choose Get Info, and modify it.

A: Apple hasn't (yet) provided a way. I find this irksome, because I like to arrange my books by genre, and those that the iBooks Store imposes are often incorrect. (Also, public-domain ebooks don't have genre info.) For now, you do have a way to make edits, but it's a bit complex. Michael Cohen wrote an article for TidBits on the topic (go.macworld.com/bookmeta), but the process involves messing with .plist files.

Q: I store my iTunes library on an external hard drive, and I sometimes take it to work. But whenever I hook it to my office Mac, the library is empty, and I have to re-add all the music from the drive. What am I doing wrong?

A: When you store your media files on an external hard drive, that's only part of what you need to make your iTunes library portable. You also need certain library files; these are what iTunes uses to store the information (or metadata) about your media files, as well as your playlists.

First, to store media files on an external drive, you have to change the location of the iTunes Media folder: Go to iTunes' Advanced preferences, click the *Change* button, and select the folder location.



For the drive to be portable, you need to move certain files that it doesn't contain. Go to your home folder (the one with the house icon and your name) and then to the Music folder. You'll see an iTunes folder and, inside it, a number of files.

The easiest thing to do is to copy this folder to the external drive, and then copy it to the other Mac, replacing the folder there. This folder, however, may hold a lot of files; if you have a vast library, the Album Artwork folder can be large (mine is more than 4GB). If so, you can simply copy the iTunes Library.itl, iTunes Library Extras.itdb, and iTunes Library Genius.itdb files. (But you don't need to copy iTunes Music Library.xml; iTunes will create that itself from the iTunes Library file.)

To keep play counts and last-played dates in sync, you'll need to copy those files from one Mac to the other each time you move the drive holding the media files. Also, if you add any music to either Mac, you'll need to keep the latest version of those files so that the other Mac will see them in your iTunes library.

Q: I have a number of playlists, and I want to burn an MP3 disc from them. How do I create a smart playlist that says to collect all music in playlist 1 and all music in playlist 2, but only those that are MP3?

A: Create a condition where *Kind is MPEG audio file*. Press the <Option> key and click the ellipsis (...) button (it's the plus button before you press <Option>) next to that rule. Add the first nested condition, where *Playlist is* the name of the first playlist; then, click the plus (+) button and add another one with the name of the second playlist. Be sure to choose *Any of the following are true* for the nested playlist condition.

ILLUSTRATION BY MICHAEL SLACK

Create

Using the Web for Video, Graphics, Publishing, Photography, and Other Creative Pursuits

Not Just an Organizer Aperture is a natural fit for Mac-based photo editing.

Seven OS X Alternatives to Photoshop

If you don't need (or don't want) Adobe's 800-pound gorilla, consider these options.

BY JACKIE DOVE

Now that Adobe has made Photoshop CC the linchpin of its Creative Cloud subscription strategy, photo enthusiasts are seeking alternatives to the engine that has driven the modern image-editing industry for more than 20 years.

We found seven good alternatives that are suitable for most amateurs and photo enthusiasts. A couple of them, unsurprisingly, come from Adobe itself. Note that prices can vary; those listed below are the latest from the vendors' websites.

Adobe Photoshop Elements 12

Photoshop Elements ($100; ★★★★½; go.macworld.com/pse12) is a full-featured photo editor, a light version of Adobe's Photoshop CC. Though it lacks certain advanced controls and high-end professional features such as support for four-color separation, its price is about one-seventh of the pro version's. Photoshop Elements targets hobbyists and advanced amateurs with a consumer-oriented approach to image editing, offering Quick, Guided, and Expert modes.

Elements also ships with an Organizer app (shared with Premiere Elements) that tracks and organizes photos and videos, and facilitates the creation of artistic projects. Features such as Pet Eye editing, Instagram-style photo effects, textures, auto smart tone, and content-aware move make Photoshop Elements a strong contender for hobbyists at all levels.

Adobe Photoshop Lightroom 5

Lightroom ($149; ★★★★½; go.macworld.com/psl5) straddles the shifting line between advanced-amateur and pro photography. Although it is available via Creative Cloud subscription, Adobe also sells it as a stand-alone, license-based application. Primarily a photo manager on a par with Apple's Aperture, Lightroom offers a high degree of editing functionality, too. Hobbyists who have advanced knowledge of editing techniques or who shoot Raw may find Lightroom to be an acceptable substitute for Adobe's high-end editor. Lightroom has a one-window interface that's easy to work with.

Advanced new features include Upright for straightening images; smart

previews for working on images when the originals aren't available; an advanced healing brush to correct irregular shapes; and a radial gradient tool that directs the viewer's focus within an image.

Apple Aperture 3.5

Aperture ($80; ♦♦♦♦; go.macworld.com/aperture) has long been a Mac photo-imaging favorite. While it bills itself as more organizer than editor, it has many editing features that hobbyists and enthusiasts can rely on. Newer versions support Retina displays and join the databases of the Aperture and iPhoto libraries to promote a smooth transition between the editors.

A new white-balance tool, an enhanced shadow-highlight editor, and an improved auto-enhance feature contribute to the app's focus on photo editing. Add fast browsing and full-screen operation into the mix, plus integration of Faces, Places, and Photo Stream features, and you have a full set of sharing and syncing options.

Apple iPhoto 9.5

iPhoto for Mac ($15; ♦♦♦½; go.macworld.com/iphoto95), the hub of Apple's iLife suite, lets you add special effects, correct exposure, remove red-eye, eliminate unwanted objects, and fix images with an assortment of sophisticated controls. Convert photos to black and white, add vignettes, blur edges, and more.

The photos you take on iOS devices can appear in iPhoto via Photo Stream, ready for sharing. When you're done with an iPhoto edit, you can get something to show for it: Right from the app, you can order prints, photo books, cards, and calendars. And this 64-bit app shares a unified database with Aperture, which offers even more advanced editing options.

Flying Meat Acorn 4.1

Acorn ($50; ♦♦♦♦½; go.macworld.com/acorn4) caters to enthusiasts looking for nondestructive editing options. This lightweight but full-service 64-bit editor, wrapped in an easy-to-use interface, offers standard features such as filters, vector tools, layer masks, compositing, and PSD import and export, along with sophisticated functions that could yank you out of your Photoshop nostalgia.

A multilayer-editing function that includes layer groups and cool filters accompanies a smart crop tool and Web export features. Acorn also supports masks, alphas, curves and levels, and multistop gradients, and is optimized for Retina displays.

> Though Photoshop Elements lacks certain advanced controls and high-end features, its price is about one-seventh of the pro version's cost.

Pixelmator 3

Pixelmator ($30; go.macworld.com/pixelmator3) has, over time, filled in many missing elements to become a true Photoshop alternative. As a full-service image editor, it offers all the traditional, recognizable tools that most photographers need to tweak images. It also provides special effects that you can choose to make visible or not.

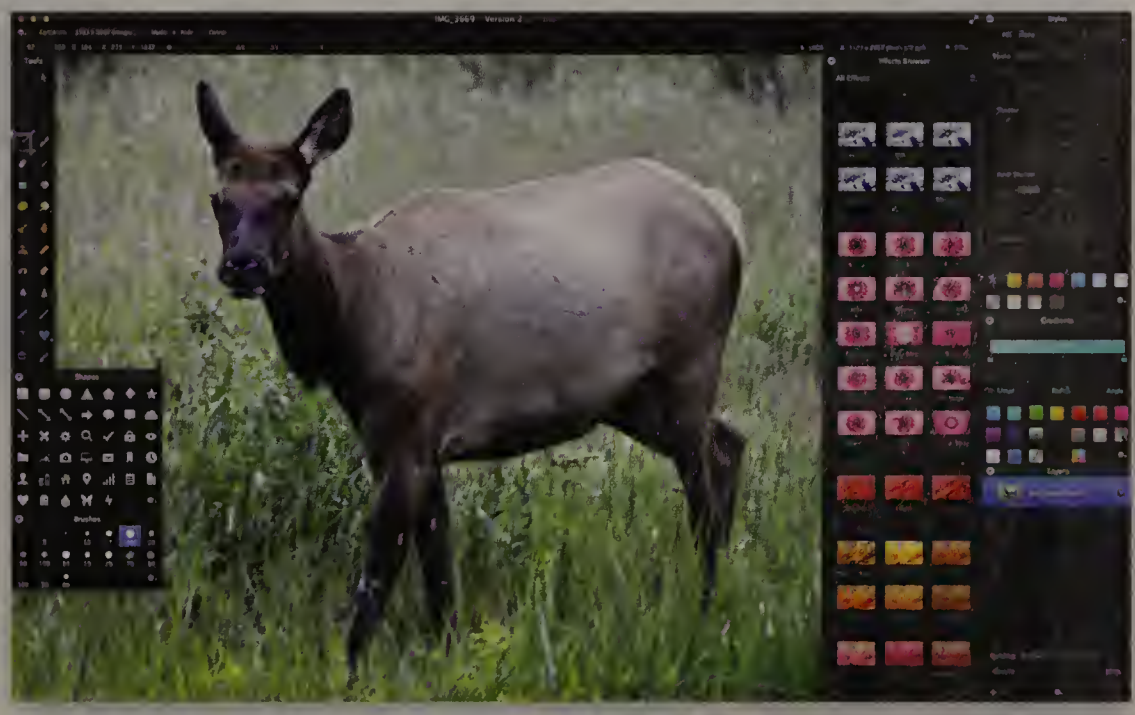
Similar to Acorn, it works only in the RGB color space, but the new version adds Liquify tools and layer styles designed to compete with Photoshop's famous features. Enhanced multiple-display support offers more flexibility. On top of that, the 64-bit Pixelmator provides a slew of other drag-and-drop and slider-based editing functions, such as painting, retouching, shapes, text tools, and color adjustments.

Corel AfterShot Pro

Corel has aimed AfterShot Pro ($100; ♦♦♦½; go.macworld.com/aftershot) at the professional playing field, positioning it as both an image editor and a photo manager. It has a great number of image-editing options as well as organizational features that will give you perspective on new ways to edit your images.

A full view of your photo library and various methods of previewing your images help you choose good prospects. Familiar controls let you apply levels and curves, sharpening, color-cast correction, and a host of other edits to your photos. AfterShot Pro includes selective-editing cursors, healing and cloning tools, and the ability to wrangle multiple versions of a photo. And as an image manager, it allows you to access photos anywhere on your hard drive without having to import them into the program.

For more on the intersection of the Mac, iPhone, and iPad with digital photography and video, check out Macworld/iWorld 2014, March 27–29 (www.macworldiworld.com).



Affordable Option Pixelmator is a viable alternative to Photoshop for mainstream editing tasks.

How to Create iMovie 10 Trailers

iMovie 10 can help you make your movies short, sweet, and exciting.

BY CHRISTOPHER BREEN

Standard iMovie projects allow you to piece together as much material as you like. But iMovie 10 also offers you a way to make videos that are necessarily limited to a running time of just over or under a minute. They're called trailers and, like the countless movie trailers presented in theaters and appended to DVDs, they're heavily templated. Here's how they work.

To create a trailer, first choose *File* ➔ *New Trailer*, press ⌘-<Shift>-N, or click the *Create* button in iMovie's toolbar, and choose *Trailer* from the menu. The resulting Create window presents 29 templates, including Action, Coming of Age, Holiday, Romance, and Travel.

Select any template, and a Play button appears over its thumbnail. Click that button to see a preview of the trailer that uses Apple-supplied footage. Each template has its own visual style and title style, along with a unique musical score.

Below each template is a Cast Members entry, which indicates how many "main characters" the template supports. You'll also see each trailer's length.

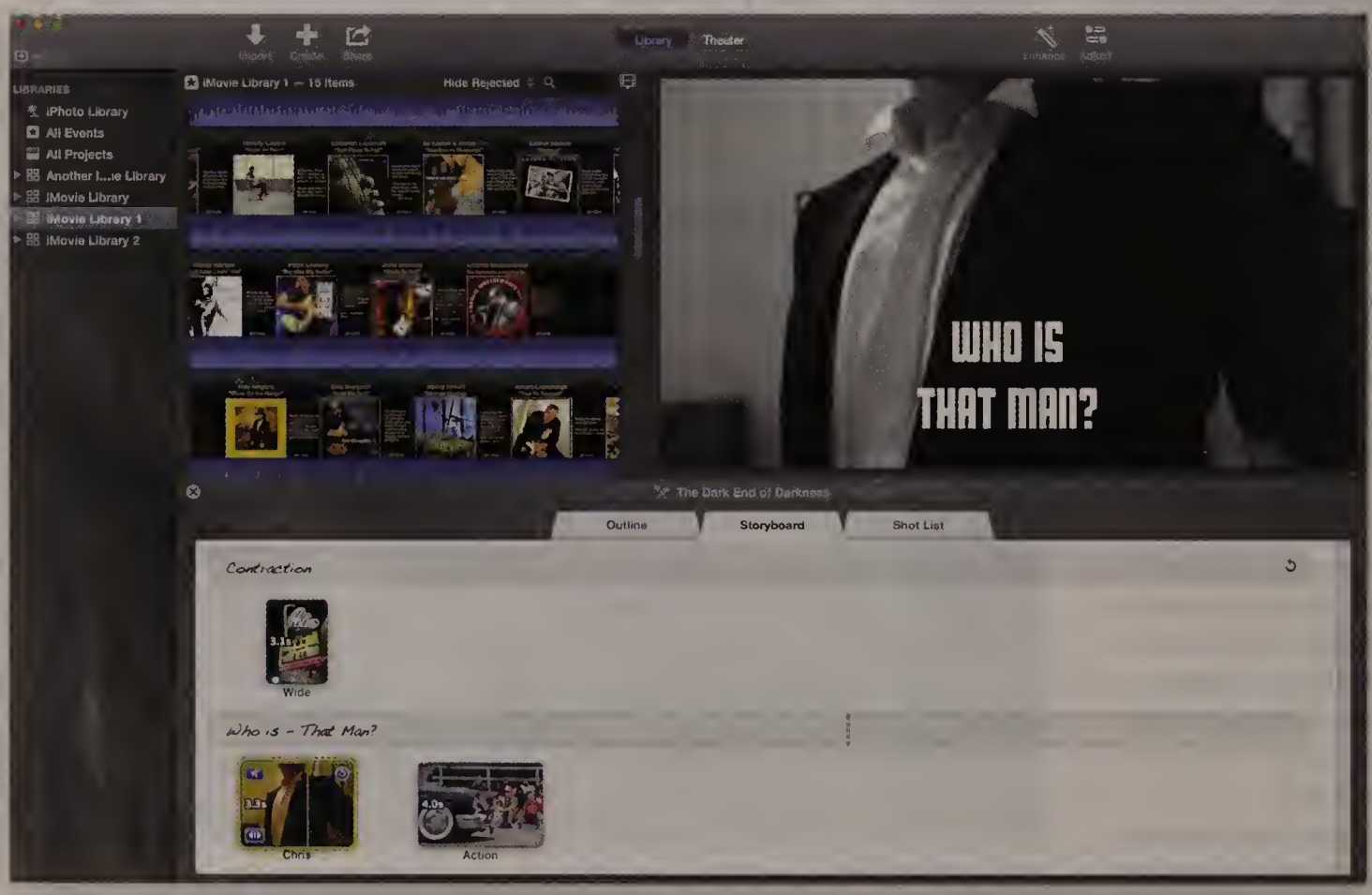
Assembling a Trailer

Double-click a trailer (or select a trailer and click *Create*), and the Trailer Editor pane opens at the bottom of the window. Within the Trailer Editor are three tabs—Outline, Storyboard, and Shot List.

Outline: In this case, "Outline" is a cute name for "title information." Here you enter the time and date of your movie, as well as the information that will appear in the Cast, Studio, and Credits screens. With some templates you'll additionally see a Video Style pop-up menu. Click it, and you can choose Normal, Film Noir, or Black & White.

Storyboard: In the Storyboard tab you enter interstitial text (for example, "Pow!" "Intrigue!" or "Meanwhile...") and place clips or stills to fill the slots within the template. Each slot indicates its length and the kind of shot it represents—a close-up image of one of the "characters" (people) or a landscape, wide, medium, group, or two-shot (a shot that shows two people in the frame). To add a clip, move to the Browser pane, find the still or clip you'd like to use, and click it at the point where the clip should begin. To preview your work, place your cursor before the beginning of the first slot (which is likely the studio credit) and press the spacebar.

Shot List: This tab gathers together all the video slots and categorizes them by type, such as action, close-up, or wide. This arrangement helps you confirm that the kind of clip you've used in a slot matches the slot type—that you really have put a head shot, rather than, say, a broad image of the Grand Canyon, in a close-up slot. You can also preview clips by scrubbing your cursor over them.



Adding Flavor Under the Trailer Editor's Storyboard tab, you can easily insert interstitial text.

Editing a Trailer

Even though you've plunked a clip into a video slot, you may replace it or edit it. To replace a clip you can drag another clip over it in either the Storyboard tab or the Shot List tab. Or select the slot and click the *Remove* icon that appears in the top-right corner of the slot.

As you hover the cursor over one of your trailer's filled slots, you'll discover two other options. Click the *Audio* icon, and you can turn on the audio track for that clip. (The clip audio is muted by default.) In this case both the clip audio and the music soundtrack that accompanies the trailer will play.

Click the *Adjust* icon that appears in the bottom-left corner of the clip to reveal the Clip Trimmer, a tool that helps you make finer adjustments to a clip's length. The process involves choosing a different starting point for the clip by clicking that location within the Clip Trimmer. To put the tool away, click the X to the left of 'Close Clip Trimmer.'

If you would like to perform the same kinds of edits that you can in a regular iMovie project, you must convert the trailer to a movie. Simply choose *File* ➜ *Convert Trailer to Movie*, and iMovie does exactly that, placing the resulting movie in the Project pane at the bottom of the iMovie window.

Saving and Sharing Your Trailer

iMovie 10 has no Save command because projects save automatically as you work on them. Given that, feel free to click the small X that appears in the top-left corner of the Trailer Editor pane to close it. An entry for your trailer will appear in the Browser pane when you select the event that holds the trailer. If you want to continue working on it, double-click it to open the Trailer Editor.

You share trailers exactly as you share any other iMovie project. Just click the *Share* button in the iMovie window or choose an option from the Share submenu within the File menu.

And that's largely it—with iMovie's Trailer Editor, you have an easy, straightforward way to create great-looking (and blessedly short) movies.

Control Focus and Depth of Field on an iPhone Camera

BY DAVE JOHNSON

One striking difference between an iPhone camera and a DSLR or other large camera is the way they focus and control depth of field. On a DSLR, you can manage depth of field by changing the aperture. On an iPhone, you don't get such flexibility, since it lacks an aperture dial. And the tiny sensor results in a large depth of field in most of your photos anyway.

You don't have to settle for that, though. Take control of your iPhone's focus to capture the photos you want to achieve.

Specify the focus: All but absolute beginners know that you can tell the iPhone where to focus by tapping the screen. To put the foreground in focus, tap something close to the camera. Want the background in focus? Tap a background subject.

Separate focus and exposure: One drawback is that the iPhone camera sets focus and exposure with the same tap. If your foreground subject is dark, you might overexpose the photo. Try a better camera app, such as Camera+ ($2; go.macworld.com/cameraplus) or Top Camera ($3; go.macworld.com/topcam), in which you can tap separately to focus and to specify where to set the exposure.

Lock the focus: In the regular Camera app, you can lock the focus. Tap and hold a spot on the screen until a yellow box flashes around your finger. Let go, and 'AE/AF Lock' will appear on the screen. You can now recompose the shot, and the focus and exposure will remain the same until you tap the shutter release button.

Simulate a DSLR's depth of field: To counter the effect of the iPhone's small image sensor, try an app such as AfterFocus ($1; go.macworld.com/afterfocus). Open a photo or take a new one, and then outline the areas that you want to be in sharp focus and in blurry relief. The app blurs the background, creating a convincing shot with simulated depth of field.

Control depth of field after the fact: One of the wonders of modern engineering is the Lytro camera, which uses an array of sensors to capture sharp focus everywhere in the scene at once. Afterward, using special software, you can change the focus point by clicking.

You can easily simulate that kind of effect on your iPhone with the assistance of FocusTwist ($2; go.macworld.com/focustwist). This app shoots a short video of a scene and presents it as a still image. When you tap in the image, the app changes the result to show that portion of the scene in focus. You can also share your variable-focus creations online.

Traveling With Your Camera: What to Take

Planning to snap photos while you're on the road? Here's what to pack.

BY DAVE JOHNSON

You don't have to be a *National Geographic* photographer to take your camera on the road, but you might need a few accessories to take the best photos and keep them safe. I've rounded up some gear designed for traveling photographers.

Put it in a proper bag: If you're still stuffing your camera into a backpack made for schoolbooks—or not using a bag at all—consider upgrading. You'll find a million bags for sale, but you can narrow the field by looking for a design that suits your lifestyle and equipment (a backpack versus a messenger bag, for example). Select a bag with a healthy amount of padding and with compartments for lenses and accessories. Some bags also have room for electronics such as an iPad or a laptop. Check out go.macworld.com/cambags for additional pointers.

If you're still stuffing your camera into a backpack made for schoolbooks—or not using a bag at all—consider upgrading.

Keep the rain away: With rare exceptions, cameras aren't made to thrive in wet environments. At a minimum, avoid damage to your camera and lenses from unexpected showers by grabbing a disposable rain cover such as the Op/Tech USA Rainsleeve (two for $7; go.macworld.com/rainsleeve); you can even use it to take smartphone photos in the rain. For a roundup of heavy-duty camera covers, see go.macworld.com/raincover.

Carry spares: Equip yourself with two fully charged batteries—one in your camera and a spare in your bag—plus a charger if you're going to be away from home for more than a day. And since memory cards are crazy-cheap these days, carry two or more cards. Don't rely on a single card, no matter how big it is, because if you do and it fails, you're out of business.

Use your phone for sharing: We've long been fans of the Eye-Fi memory card, which can use Wi-Fi to upload photos to your Mac. When you're on the go, you might appreciate the new Eye-Fi Mobi (starting at $50 for 8GB; www.eye.fi), which can send photos from your camera to your phone for posting to sharing services.

Keep Things Safe A good bag and a rain cover are essential items for protecting your gear during travel

Improve your flash: Need to use your flash on a shot? The Lightscoop (www.lightscoop.com) bounces and diffuses light from a built-in flash for better results—and it takes up almost no space in your bag. Choose between the original Lightscoop (for DSLRs; $30) and the Lightscoop Jr. version (for compact cameras; $19).

Steady your camera: Tripods are big, bulky, and clumsy. For a lightweight, compact alternative, try the Joby GorillaPod (joby.com); the Original model costs $20, while the fanciest of the other five models runs $100. Or check out The Pod (thepod.ca), a beanbag with a tripod mount. Prices range from $8 to $45.

Consider carrying a laptop and cable: If you're going to be away for more than a day or two and you want to protect your photos, your first line of defense is a laptop. Bring one along with a memory card reader or USB cable, and you can copy photos to it each evening for safekeeping and editing. Another option is to store your photos on an iPad, with help from the Camera Connection Kit ($29; go.macworld.com/camconnect).

Prepare to back up: Also consider carrying an external hard drive with you. The decision here comes down to how neurotic you are about ensuring that you've protected and backed up your photos. A palm-size hard drive such as Seagate's Slim Portable Drive (go.macworld.com/slim) costs less than $100, holds 500GB of data, and connects without requiring external power.

Intensify Editing App Highlights the Details

BY JACKIE DOVE

An Extensive Toolbox Adjustable one-click presets allow you to get a massive amount of detail out of your photos.

Review

RATING ★★★★

PRICE $40–$60

COMPANY Macphun

URL macphun.com

A photo editor that specializes in enhancing details, Intensify works with various formats, including Raw and PSD (Pro version only). Although it is targeted at enthusiasts, the software will also prove useful to pros seeking a different take on an image fix.

Intensify runs on 64-bit Macs with OS X 10.7 and above. The $40 stand-alone app is sold in the Mac App Store. The $60 Pro version, available on the Macphun website or loaded on 4GB SD cards for retail sale, features a plug-in that works with Adobe Photoshop CS5, CS6, and CC; Photoshop Elements 10 or later; Lightroom 4.0 or later; Apple Aperture 3.3; and iPhoto. We tested the Pro version of the program.

Preset Action

Some of Intensify's presets have clothing-catalog-style names such as Autumn Morning, Calm Day, Good Cityscape, and Spicy, and the meanings can vary. Others, such as Crisp, HDR Vivid, and Strong Details, are easier to decipher.

The presets, which Macphun has relied on pro photographers to develop, come in eight categories, including Architecture, Detail Enhance, and Landscape. Within each category reside 2 to 16 settings that you can apply with intensity from 1 percent to 100 percent. But you don't have to start with presets—you can use the program's Adjust sliders on attributes such as color temperature, vignette, and opacity. An RGB histogram offers toggle buttons that let you see where photos have been clipped for highlights or shadows.

The presets are designed to bring out the drama in photos, revealing details in low-contrast, complex shots and improving color range with special-effects layers and selective enhancements. Each preset has an adjustment button that leads to the underlying controls; one click lets you delve deeply into the mechanics of each preset. You can star presets as favorites and save your tweaks as custom presets.

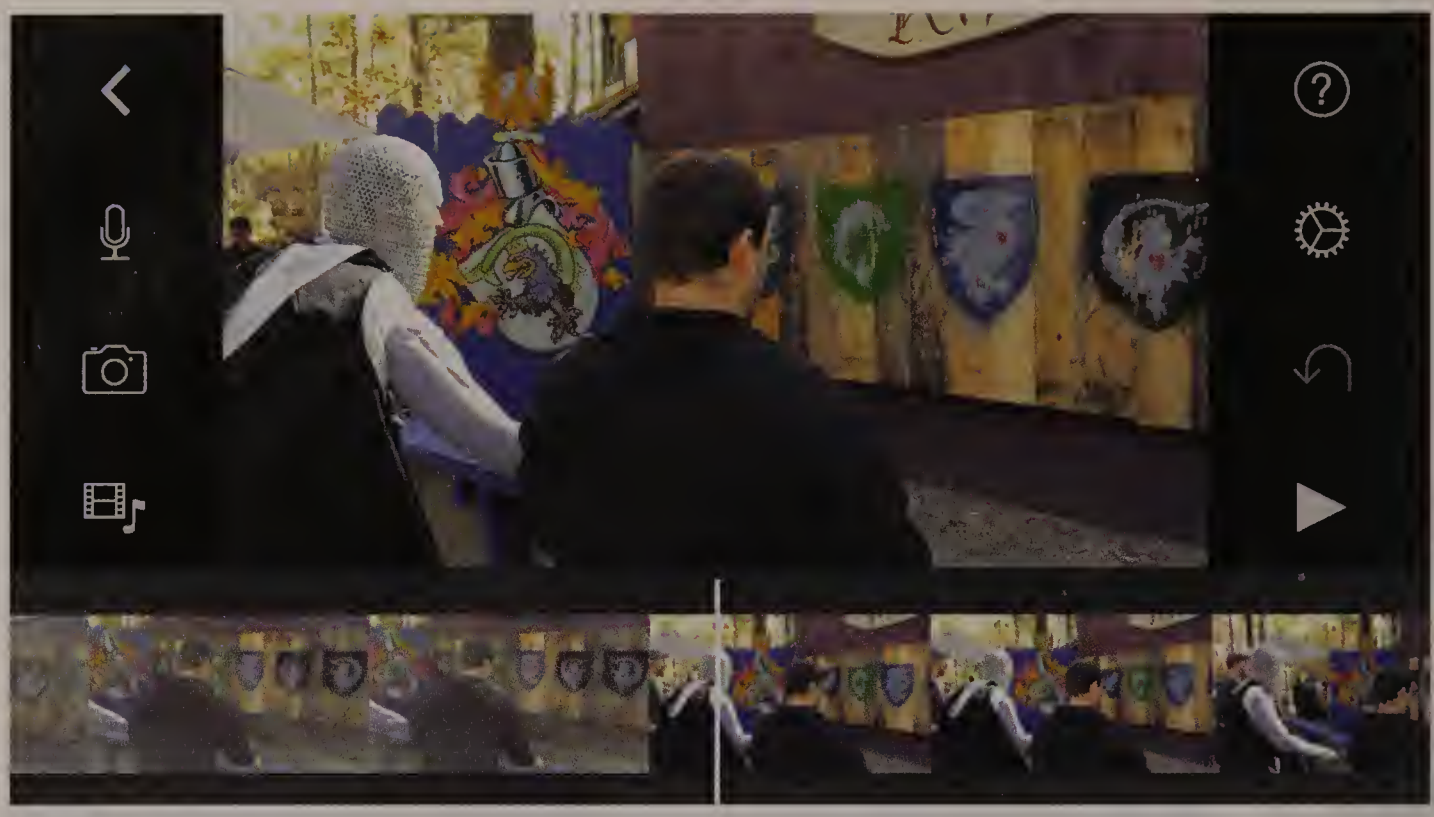
You don't have to adjust an entire photo; you can apply edits to portions using a mix of tools. Adjustable brushes, for example, let you paint effects on your image in conjunction with the masking feature.

For the most part Intensify Pro did a fine job, but a few things need improvement. First, the interface lets you work on only one image at a time. Second, I noted a short lag when changing between presets: The program reverts to the original state for a second or so before registering the new adjustment. Lastly, Intensify saves only to its own MPI format, though you can export to JPEG, PNG, GIF, and more.

Bottom Line

Intensify does not pretend to be a Photoshop replacement, but its ease of use and its swift, unique results make it a worthwhile stand-alone app or plug-in. Sometimes the preset names are deceptive, as their effect depends on the photo, but overall Intensify feels surprisingly complete and fully baked for a 1.0 app.

> The program's presets are designed to bring out the drama in photos, revealing details in low-contrast, complex shots and improving color range.



Sleek Looks The redesigned iMovie interface embraces the simple lines of iOS 7.

iMovie for iOS 2 Slow-Mos Its Way to Greatness

BY SERENITY CALDWELL

Review
RATING
PRICE
$5
COMPANY
Apple
URL
apple.com

Apple's revamp of iLife has added great new features to each of its apps, and iMovie for iOS is no exception. iMovie feels faster and more fluid on both the iPhone and the iPad.

The beautifully simplistic iOS 7 overhaul splits the app into three sections: Video, Projects, and Theater. One big change is the focus on easy clip viewing and sharing. The Video screen shows mini timelines of the clips in your Camera Roll. You can tap any filmstrip in Video mode to make it larger, as well as slow down or speed up the clip.

Tapping the *Create Movie* option from the Share button sends your selected clip to the Projects screen, where you can share or export it, or enter editing mode. You can share a project only via AirDrop or iTunes; other sharing options merely export a static version of your film. AirDrop sharing works so perfectly for sending projects between iOS devices that it almost makes me mad that there's no similar way to send projects to the Mac.

The Theater tab displays exported videos—and thanks to iCloud, the videos also show up on any other Mac or iOS device that has iMovie and is linked to your Apple ID. You can stream the movie from iCloud, or download it. Any video you share in Theater counts toward your iCloud storage limit, however. In addition, if you re-export a project video, it appears as a duplicate, rather than replacing the old version. And you can't share projects via Theater—only final videos.

New Effects and Advancements

While the changes in the mobile iMovie aren't as plentiful as those in iMovie for OS X, they're still impressive. Here are some of the most notable.

Multilayer editing: Though you can't drag clips to create an overlay in iOS as you can on the Mac, you still get access to picture-in-picture and overlay options for clips. Once you choose an option and import a clip, you can move the clip on a newly created second video line (but you can't drop it back into the main timeline).

Bullet time: If you want to go for the more-nuanced speed variations found in the iPhone 5s Camera Roll, you need to use the speed controls in editing mode. The best method is to split a clip into sections and decrease the speed for the middle portion; however, if you prefer, you can do a straight speed adjustment. iMovie's adjustments range from one-quarter to two times normal speed.

Slo-mo recording in-app: iMovie now has an in-app camera that lets you toggle between 1080p resolution at 30 frames per second and 720p at 120 fps (or 60 fps, if you're on an older device such as a non-Retina iPad mini or an iPhone 5).

Audio advancements: Options include detaching audio, splitting clips, changing speed and pitch, fading and duplicating clips, and sending them to the background. Though working with audio can be tricky on the iPhone, it's still surprisingly doable.

Bottom Line

iMovie for iOS remains as easy to use as ever for cutting quick films, and now Apple has simplified the organization and sharing of clips. I do wish it had more effects beyond slow-motion and picture-in-picture. Project sharing could use work, too. Those nitpicks aside, the app is a must-have.

Ember: Software for Serious Scrapbookers

This image-collection tool shows that there is more to scrapbooking than just cutting and pasting photos.

BY MARCO TABINI

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Scrapbooking is an activity that many people perform for professional reasons: For example, some collect articles and website URLs for reference material, while others amass images for creative inspiration. This is the kind of work that Ember seeks to facilitate.

The app is the successor to Realmac's LittleSnapper, which let you grab a screenshot of a running app or webpage and store it or share it. With Ember, in addition to importing images, you can take shots of your entire screen, of a single window, or of a portion of your desktop. You can even take a screenshot on a timer—a useful feature when an action cannot be frozen easily.

Ember also supports capturing webpages, via a built-in browser or an extension for Safari and Chrome. A screenshot taken this way includes the entire page, rather than just the portion of it that is currently visible. You can use an RSS feed as a source of screenshots, as well.

Unfortunately, Ember captures only images: You cannot easily copy and paste text and individual HTML elements from a captured webpage, and you can't import text files, PDF files, or the like.

Collating, Annotating, Sharing

Where this app shines is in organizing items. As you capture images, it catalogs them by their origin: screen, Web, photo, and so on. You also can define your own groups, which you can populate by dragging and dropping images in. An image can belong to multiple groups.

You may annotate images in different ways. For example, you might insert a title (or edit the existing one on a webpage) and provide tags, in addition to drawing and typing comments directly on each image, or highlighting portions of it.

All of this metadata feeds into Ember's robust search functionality. You can then look for content by the attributes you explicitly assign to every item, as well as by implicit properties such as colors and dimensions. You can even save searches into "smart collections" that the app updates as you import content.

Ember also includes sharing features. Your first such option is to export images to disk. Cleverly, the app allows you to specify whether to save annotations alongside the image, which means that you can add notes and comments on an item without fear of "ruining" the original. You can save images as JPEG, PNG, or PDF files, or as Ember documents that you can then reuse on a different computer (the app supports storing your library on iCloud, but you may want to share portions of it).

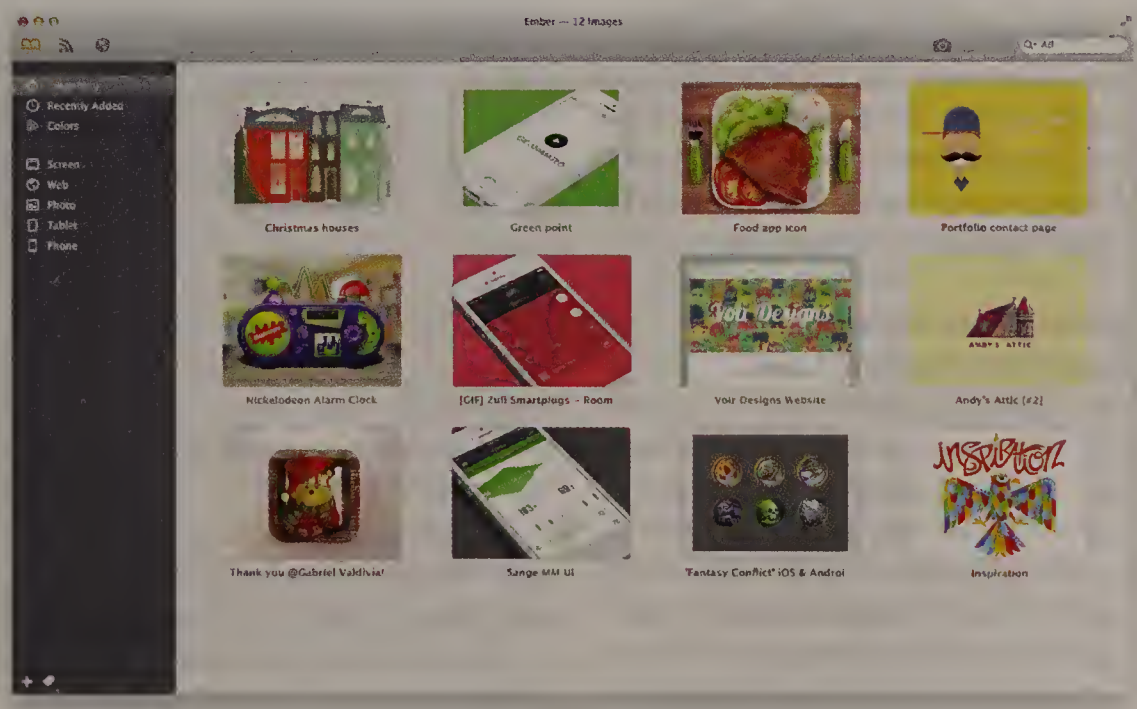
You can also send your work to someone via the Share menu, which supports AirDrop, Twitter, and other services. In this case, you can't avoid sending annotations along for the ride; this is not a big problem, since you can simply save to disk and then share the original images untouched by your hand, but it does feel like an inconvenience that the developers could address.

As you capture and collect images, Ember catalogs them by their origin: screen, Web, photo, and so on. You can define your own groups, as well.

Bottom Line

Ember is a great app that targets a narrow set of needs. On one hand, some of the limitations can be frustrating; being unable to capture anything but images makes Ember less than ideal for work that deals with text documents such as PDF files (which it refuses to import even as images).

On the other hand, if you're a designer or some other practitioner of the visual arts, you will probably be a very happy customer. Ember has many clever little touches that make using it an absolute joy.



Neat and Organized Ember is a good tool for collecting, sorting, and annotating images.

Help Desk

Answering Your Questions and Sharing Your Tips About Getting the Most From Your Mac

Mac OS X Hints

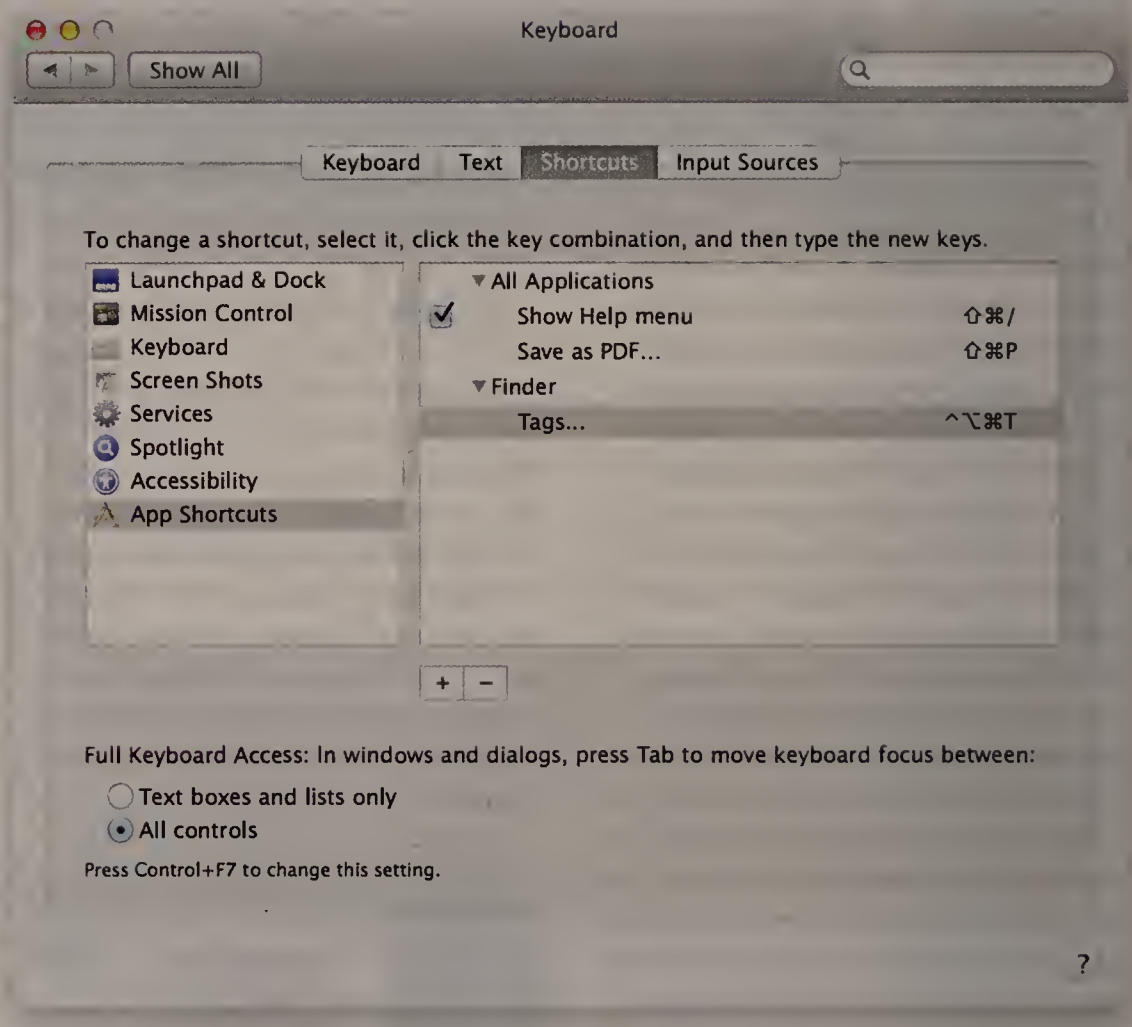
The insider tips you won't get from Apple.

BY LEX FRIEDMAN

Use Touch Camera Icon in Lock Screen to Turn Off Flashlight

In iOS 7, Apple introduced Control Center, the collection of settings you can access by swiping up from the bottom of the screen. On the iPhone, one of those options is to trigger the flashlight.

You probably think you need to swipe back up to Control Center again to turn the flashlight off. Nope; simply tap the camera icon on the lock screen to turn



Terminal Shortcuts Create app-specific and systemwide keyboard shortcuts from within the Terminal.

Trigger Spring-Loaded Folders Even When They're Turned Off

With spring-loaded folders, you can drag a file over a folder, hold it there for a moment, and the folder pops open. But as helpful as that feature is, it can occasionally get annoying.

If you've disabled spring-loaded folders, but have a moment where you really need them, you can do the following: As you are holding a file over a folder that you would like to spring open, just *double*-press the space bar. The folder will spring open immediately.

Add Keyboard Shortcuts From the Command Line

You can create custom keyboard shortcuts from System Preferences on your Mac (under Keyboard → Shortcuts). But you're a power user, and you already know that. However, did you know that there's a way to create keyboard shortcuts from within the Terminal?

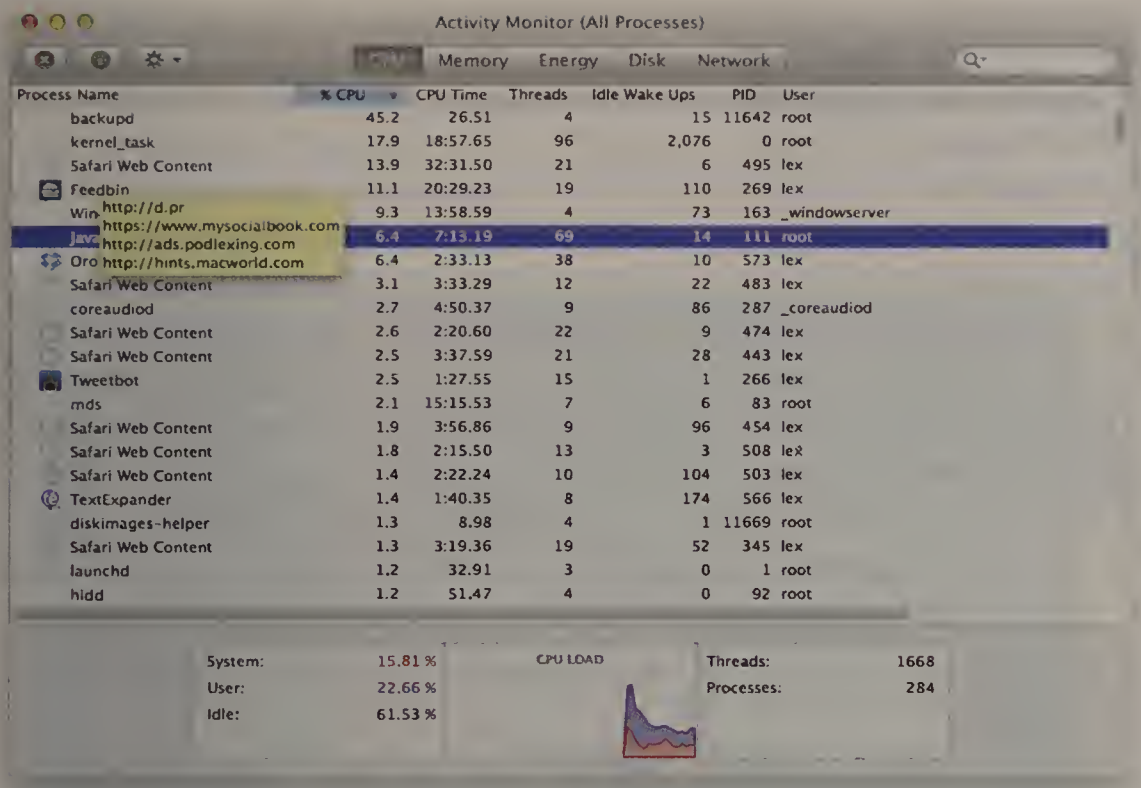
If you have lots of shortcuts that you want to define, or multiple Macs on which you want to employ the same set of shortcuts, using the Terminal to do so makes good sense. You can create either application-specific keyboard shortcuts, systemwide ones, or both.

For application-specific shortcuts, use this command:

```
defaults write com.developer.app NSUserKeyEquivalents -dictadd "Menu Item" -string "@$~^k"
```

The command seems to have a lot of gibberish at its end. Here's the explanation. The modifier keys are represented with a unique set of symbols: ⌘ is @, <Shift> is $, <Option> is ~, and <Control> is ^. So in this example, the keyboard shortcut being set is ⌘-<Shift>-<Option>-<Control>-K.

The `com.developer.app` slug is app-specific. To find the identifier for the app you're after might present its own challenge. You can use AppleScript



Check the Lag Activity Monitor can help keep track of webpages that slow down the browser.

from the command line to find a given application's bundle identifier name:

```
osascript -e 'id of app "Finder"'
```

would, for example, generate *com.apple.finder*.

For systemwide shortcuts, you needn't deal with the app identifier at all. Instead, you add in the `-g` option.

To make a systemwide shortcut of ⌘-<Control>-M to check the Mac App Store for updates, for example, you would use this command:

```
defaults write -g NSUserKeyEquivalents -dict-add "Software Update..." -string "@^m"
```

Note that you may need to relaunch the apps in question before your new keyboard shortcuts take effect.

Use Activity Monitor to Check Pages Slowing Safari

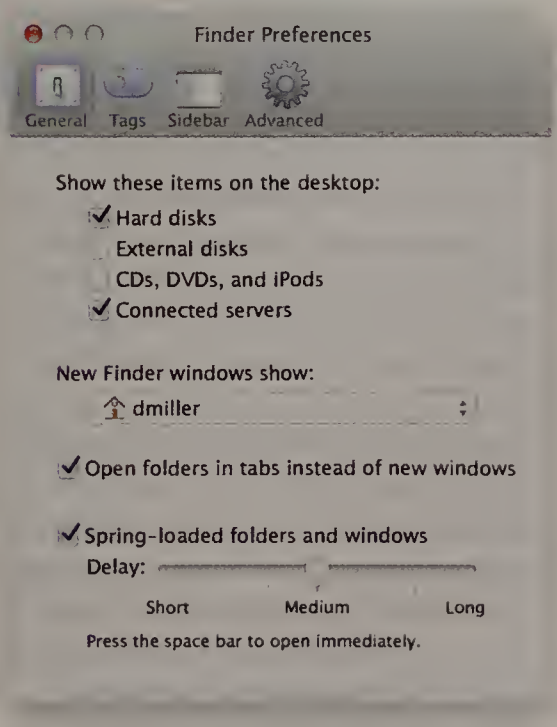
Sometimes Safari starts gobbling up a lot of your Mac's processor time. When that happens, you can turn to Activity Monitor to figure out which webpages are causing the browser to lag.

Launch Activity Monitor (it's in /Applications/Utilities), click the *CPU* tab, and sort by the % CPU column. Look for Safari Web Content processes that rank high on the list, and simply hold the mouse over them for a second or two.

A tooltip will appear listing the webpage attached to that process. That should allow you to identify which pages are overburdening the browser.

New Power Button Changes in Mavericks

Apple changed the behavior of the Power button in OS X 10.9 Mavericks. It used to be that pressing that button would immediately cause the Shut Down dialog box to appear, and you would see Shut Down, Restart, or Sleep options. That's not how the Power key works in the updated Mavericks.



Spring Open Folders Double-press the space bar to spring open folders even if you have disabled the option.

> If Safari starts gobbling up processor time, turn to Activity Monitor to find which webpages are causing the browser lag.

Here's what happens now: Press the key once, and your Mac's display will almost immediately go to sleep. However, that's not quite the same as sleeping your Mac; it's much more akin to the Sleep/Wake button on an iPhone or iPad: It shuts off the screen, but processes on the Mac keep on running.

Press and hold the Power key for a second or two, and the familiar Shut Down, Restart, Sleep dialog box will appear. And if you hold the Power key for longer than a couple of seconds, your Mac immediately powers off.

That last option is for emergency use only; ideally, you would shut your Mac down by using the Shut Down command, which allows the computer to take care of some internal housekeeping before your Mac powers off.

Add Apps and Docs to the Finder Toolbar in Mavericks

In previous versions of OS X, dragging applications and documents into the Finder's toolbar was all it took to save those shortcuts. That behavior changes in Mavericks.

Where before you could simply drag any icon up to the Finder toolbar and hold it there for a second to add it, you now need to first hold down the ⌘ key and then start dragging the desired icon to the toolbar.

With the ⌘ key held down, you can add applications and documents to the toolbar as you desire.

You can still remove icons in the same way as before: Hold down the ⌘ key, drag the icon away from the toolbar, and then release.

Mac 911

Solutions to your most vexing Mac problems.

BY CHRISTOPHER BREEN

How Secure Is iCloud?

Q: Both my iPhone 4s and my iPad Air are set up to use iCloud. I don't like having passwords and personal information in the cloud, however, and consequently I'm thinking of attaching a password-protected storage device to my router so that I can create my own private "cloud." Just how secure is iCloud?

John McKnight

A: I think it would be worth your while to read Apple's *iCloud: iCloud security and privacy overview* document (go.macworld.com/icloud_doc), which spells out how your data is encrypted—both when it's being transmitted between your computer and Apple's servers and while it's stored on those servers.

The gist of the document is that Apple uses a minimum of 128-bit AES encryption. This is the encryption standard used by banks and other financial institutions. And as I write this, there is no practical way to crack AES-128 encryption.

Your local-storage solution is certainly an option, but it's not very convenient.

After all, if you're concerned about that data touching the Internet, you won't want to allow it to be accessible via any means other than your local network. And even then, you'll have to lock down that storage device with a very firm password in case someone breaks into your home and steals it. Also, you should memorize that password rather than writing it down, in case someone finds the password you've taped to the bottom of the drive, and uses it to access your stuff. And then you'll need to back up its data to yet another device and keep that device in another location in case the original hard drive fails or is damaged.

I don't mean to make light of your security concerns, but once you head down the path of "just how safe is safe?" it doesn't take long before concern turns into obsession. I suggest, instead, that you take reasonable precautions.

For example, writing down passwords and sticking them to the side of your computer monitor is a bad idea. Using the same password for multiple accounts is little better. Creating passwords that are easy to guess is simply asking for trouble. Placing sensitive information such as a credit card number or social security number in email is a bad idea because email is rarely encrypted. And failing to password-protect your mobile devices and computer is a risk that you shouldn't take. In other words, the things we commonly do for the sake of convenience are often far riskier than trusting our data to services such as iCloud.

Prevent Snooping Relatives From Reading Your Stuff

Q: Members of my extended family will be visiting and sharing my Mac to check their email and surf the Web. I have some files that I'd like to keep hidden from them. I'm particularly concerned that some of

ILLUSTRATION BY DANIEL DOWNEY JR

these files will appear in Spotlight. Is there any way to hide them?

via the Internet

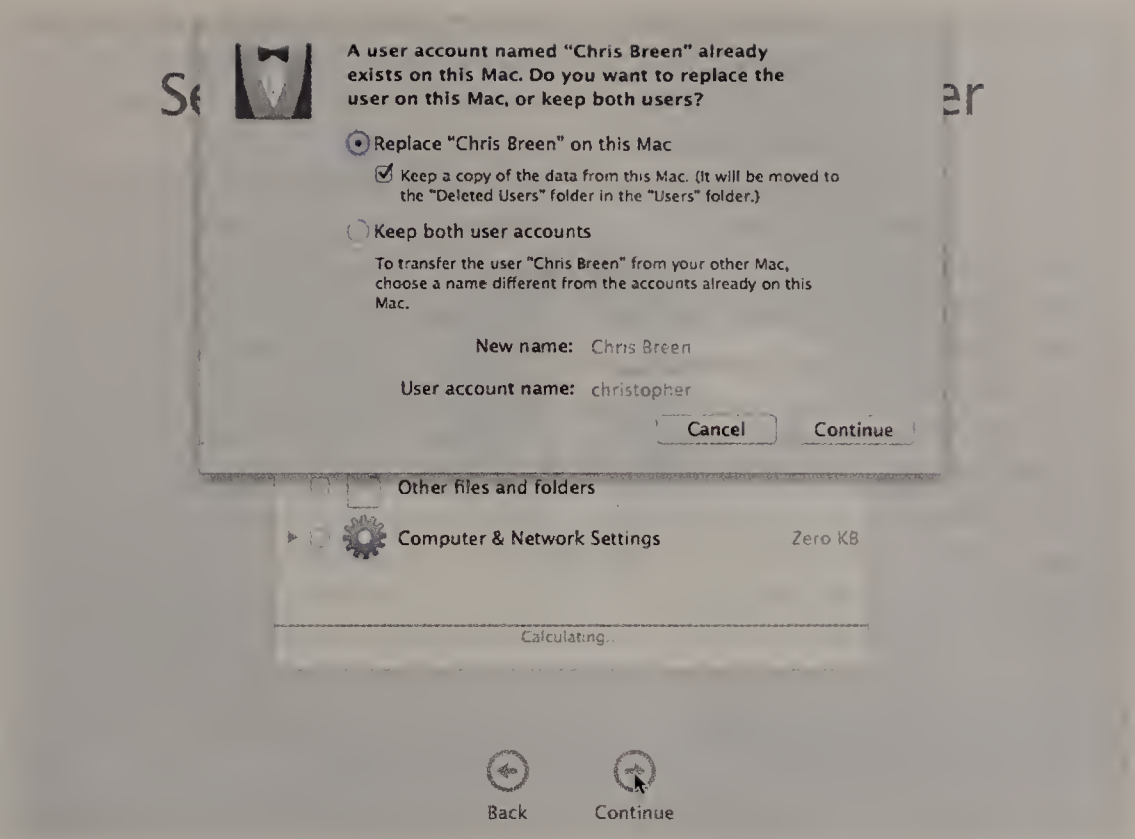
A: I'd start by asking your relatives to use your Mac's Guest account. To ensure that it's an option when your Mac starts up, launch System Preferences, select *Users & Groups*, click the *Lock* icon, and enter your username and password to unlock the preferences; then select *Guest User*, and enable the *Allow guests to log in to this computer* option. In addition, click *Login Options* and make sure that Automatic Login is switched off. If you then log out of your account, the login screen will display at least two accounts: your own and the account for the Guest User. To use your Mac, your relations will choose the Guest User account and then do their business via Safari and webmail services.

If, for some reason, you want to let your guests use your account, you can keep your sensitive files on another volume. If you have few such files, you can copy them to a USB drive, delete them from your Mac's hard drive, and tuck away that flash drive until your relatives have departed. Later, you can copy them back onto your Mac.

Another option is to password-protect those files by placing them in a folder and then creating an encrypted disk image of that folder.

If you're worried that your files might appear in Spotlight, just gather them together in a folder, launch System Preferences, select *Spotlight*, click the *Privacy* tab, and drag that folder into the Spotlight window. This will prevent Spotlight from searching the folder.

But there's one lingering problem with this solution. If your precocious niece is familiar with the workings of the Mac OS, then all she needs to do is launch the same preference and click the Privacy tab to take a gander at what you've hidden. Fortunately, you can thwart her. Just create a folder for the files you wish Spotlight (and your niece) to stay out of, and append `.noindex` to its name (so it will look like 'My Secrets.noindex', for example). This extension tells Spotlight to exclude the folder and its contents from searches. And best of all, any folder containing the extension will not appear in Spotlight's Privacy tab.



Final Migration Steps Migration Assistant gives you the option to replace an account with one of the same name, or to create a new one.

Transfer Backups From Time Machine to a New Mac

Q: My wife and I currently have our own MacBook Pros. But as we are making the transition to iPads, we plan to replace our oldest laptop with a new iMac. So for the first time, I need to set up a Mac with multiple user logins. Can I set up my account by restoring from my Time Machine backup, and then set up my wife's account by restoring from her Time Machine backup?

Mike Vogel

A: Yes—and here's how to do it. First, on the new iMac, make sure that you have access to the drive where the Time Machine backup is stored; then launch Migration Assistant, which you'll find in /Applications/Utilities. The assistant will notify you that it needs to quit all open applications. Allow it to do so.

The first Migration Assistant screen will offer three options regarding data transfer. Select the first one, which reads *From a Mac, Time Machine backup, or startup disk*, and click *Continue*. In the next screen, choose the drive that holds your backup and then click *Continue*.

The window that follows will present you with a list of any backup archives the drive holds. In all likelihood, there's just one. Select it and click *Continue*.

You may then be asked to choose a stored volume from within the selected backup archive. Do that and click *Continue*.

Finally you'll be asked to select the accounts that you wish to restore. As you have indicated that you haven't set up multiple accounts in the past, you should see just one account listed.

You also have the option to restore applications and computer and network settings. If you're starting from scratch and intend to reinstall fresh copies of everything, disable these options. If you want to transfer those applications and settings, leave them enabled.

If you have already configured an account on the new iMac that uses the same user name that you have previously used on your MacBook, you will see a red warning that reads "This user needs attention before Migrating." When

you click *Continue*, a sheet will appear that gives you the option either to replace that account with one that has the same name or to keep both user accounts (in which case you must create a new name for the account that you are transferring over). Indicate the choice that you prefer, and then click *Continue*, and the account will be restored.

As for your wife's account, there's no need for you to set up an account for her on the iMac. Instead, simply repeat this procedure using her Time Machine backup, and the account will be created for her when it's transferred from her MacBook Pro's backup.

Downgrade Your Airport Device's Firmware

Q: I recently upgraded my Airport Time Capsule's firmware—but now the front light just keeps flashing yellow, and the Status field in the Airport Utility has the message "No DNS Servers." What do I do now?

Glen Green

A: First, try resetting your network. To do this, power down your broadband modem as well as the Time Capsule. Then plug in the modem until all of the correct lights appear. And finally, at that point, plug in the Time Capsule. When it fully boots, it should obtain the proper information from the modem.

If that approach doesn't work, go back to the version you were using before. If I understand your situation correctly, the firmware you previously had on your Time Capsule worked perfectly well. It might again, and thus solve the problem.

Unlike with an iOS device, where you are stuck when you upgrade the device's software, you can roll back the firmware on an AirPort device. And there are two ways to go about it.

On your Mac, launch the AirPort Utility (found in /Applications/Utilities). Then, In the window that appears, select your *Time Capsule*. Hold down the <Option> key, and click the version number entry. When you do, a menu will appear that lists previous firmware versions. Choose the one that worked for you. You'll be asked to confirm that you want to do this by clicking a *Continue* button. Do so, and the AirPort Utility will downgrade your Time Capsule's firmware—and, I hope, solve your problem.

Alternatively, you can roll back firmware on AirPort devices from within the iOS version of AirPort Utility.

To do this, simply download AirPort Utility to your device and launch it. Then tap in succession your *Time Capsule*, *Version*, and *Older Versions*.

Now tap the one you wish to use, and—just as happens when you use the AirPort Utility on your Mac—your Time Capsule's firmware goes back in time.

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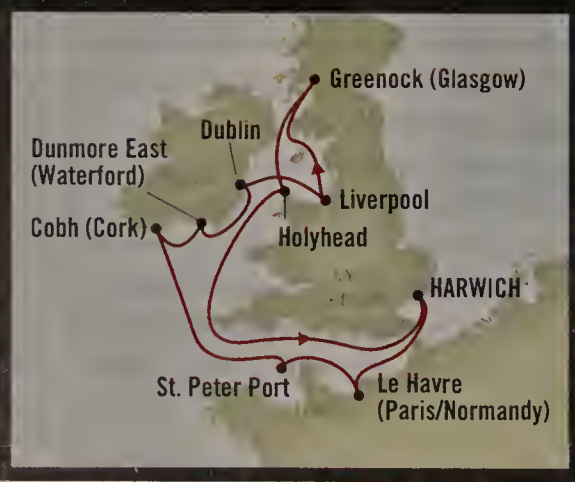

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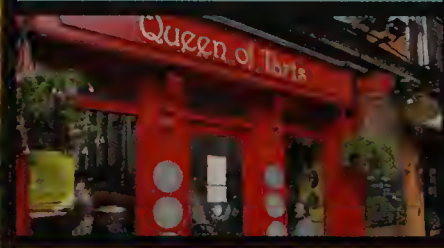

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Using an External Keyboard With an iPad

Q: My family recently gave me an iPad as a gift. I like it, but I find typing on it difficult. I've heard that you can use a real keyboard with an iPad, but I don't understand how. Can you help?

Nancy Perrin

A: You need a Bluetooth wireless keyboard. Though Apple sells its own Bluetooth keyboard for $69, you can find just-as-capable keyboards for around $20 on Amazon.com.

The trick to successfully using a keyboard with your iPad is to pair it. This is how it's done for iOS 7: On your iPad, first tap *Settings* and then, in the resulting Settings screen, tap *Bluetooth*. If Bluetooth is switched off, switch it on.

Follow the instructions that accompanied your keyboard for allowing it to broadcast its availability for pairing. (This step often entails pressing and holding a button or key for a few seconds.) When the keyboard becomes available, its name will appear in the iPad's Bluetooth screen. If the device doesn't connect automatically, you may be asked to type a string of numbers on the keyboard, at which point it will be paired, as evidenced by the word "Connected," which will appear next to its name in the iPad's Bluetooth screen.

You're now ready to enter text with the keyboard. Just navigate to an app that accepts keyboard input—Notes, for example—and start typing. The characters you type will appear on screen. Not only that, but you should be able to navigate through the file with the keyboard's arrow keys as well as being able to use keyboard shortcuts such as ⌘-A, ⌘-C, ⌘-X, and ⌘-V to select all, copy, cut, and paste, respectively. You can quickly unpair the iPad from the keyboard by switching off the keyboard's power.

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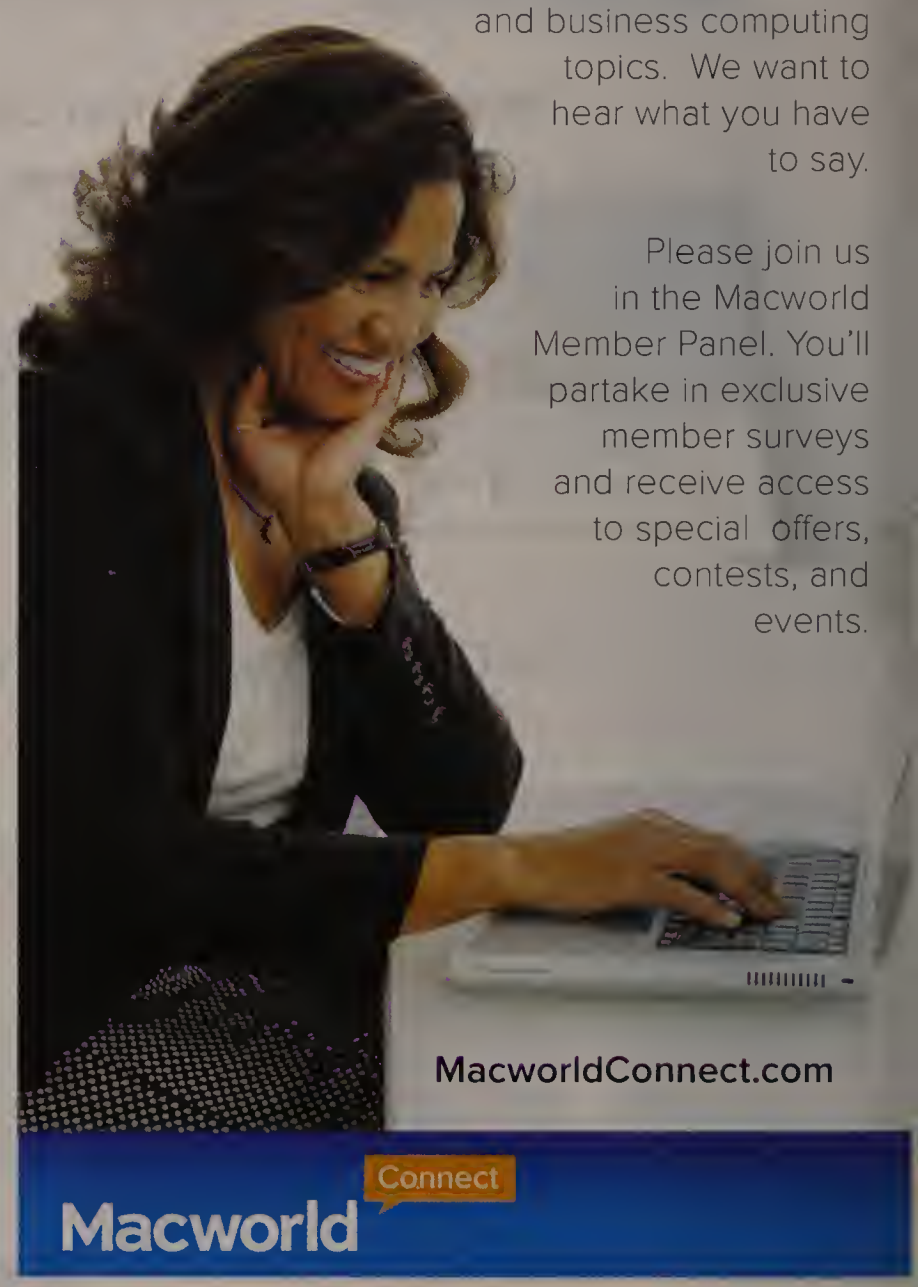

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Jeffrey Ely

Professor of economics at Northwestern University

What do you do?

I teach and do research on game theory and information economics. I try to understand how to channel selfish motivations into good social outcomes. My blog, Cheap Talk (cheaptalk.org), mostly concerns how to think about everyday situations through the lens of economics and game theory.

Recently I started a venture modernizing pricing for sports, concerts, and the like called Purple Pricing (go.macworld.com/purple). My partner, Sandeep Baliga, and I are applying our game-theory research to remove gamesmanship from the ticket-buying experience.

What hardware do you use?

I have Macs everywhere. A **MacBook Air** is my portable, an old **MacBook** serves as a desktop at home, and an **iMac** sits in the office. My phone is an **iPhone 5**. For most of my adult life, I was a Linux devotee, partly as a hobby and partly for the power and flexibility of Unix and free software. As I get older I have less time for messing with things like ifconfig and Xorg.conf, but I still rely on Linux for my mail server, Python, and tools that don't exist anywhere else. So I have a tiny box that runs an incredibly minimal headless **Ubuntu** installation.

And what software?

The three most important programs for me are **TextMate** and **Safari** on the Mac, and **Postfix/IMAP** on my Linux box. With TextMate, I write papers in LaTeX, and with Safari I write my blog and waste precious time. My mail-server setup organizes pretty much all of my life. I have about ten email addresses that keep parts of my life in their own channels. I write probably 20 email messages to myself a day with reminders, thoughts jotted down, and life-journalism. I think most software for "getting organized" is redundant once one understands how to get the most out of old-fashioned email.

What would be your dream setup?

I think of hardware and software as a means to get past the routine and to the novelty-horizon of whatever I am working on. So my dream setup is to have a combination of secretarial staff and predictive algorithm that can figure out what I need but am not interested in doing myself, and do it for me.

If I could ask for an improvement in technology, it would be to allow me to compose email in all situations unobtrusively. Thoughts arrive at any old time. I would like to come as close to direct transcription of my thoughts as possible. Siri is getting closer, but I can't use Siri when I am in a conversation and need to mentally check out to record an idea. I could imagine a device on my index finger with which I can write in the air, even with my hands in my pockets, and it puts my words in an email to me.

*Interview courtesy of **The Setup** (usesthis.com; Twitter: @usesthis).*

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